The Mining Journal
AND ATMOSPHERIC RAILWAY GAZETTE,

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 586.---Vol. XVI.] LONDON: SATURDAY, NOVEMBER 14, 1846. [Price 6d.

CORNWALL.—TO THE PROPRIETORS, PURSERS, and AGENTS of the several MINES within the BOUNDARIES hereinafter described—the same being situate within the Duchy Manor of Tywarnhayle and Tywarnhayle Tyas, wherein I claim to be the Proprietor of the Surface, and a portion of the Ores and Metallic Minerals.

I do hereby give you Notice,

That you are not to remove or carry off, nor permit or suffer to be removed or carried off, from any of the mines within the boundaries hereinafter mentioned, any of the engine-houses, boiler-houses, account-houses, or any buildings whatsoever, erected for the purpose of mining; nor from any mine or mines that may be considered as abandoned within the said boundaries; nor any refuse stuff, commonly known as halvans, containing metallic ores. The said boundaries are as follows:—The whole of the parishes of St. Agnes and Perranzabuloe, Wheal Park, and many other mines which lie to the South of the Five Burrows, in the parish of Kenwyn; the Kellewerris Consols, Wheal Hallenbeagle, and Wheal Busy Mines, in the parishes of Kea and Kenwyn; Wheal Chance and Wheal Vor, commonly known as Treskerby Consols Mines, and Wheal North Downs, in Redruth and Gwennap; and, also, New North Downs, Wheal Plenty, and many other mines on Sian's Commons, and wastes, in the parish of Redruth. WILLIAM HOSKINS.

Dated Beacon, St. Agnes, Oct. 5, 1846. 1

TO THE TINNERS OF PERRANZABULOE, ST. AGNES, AND THE NEIGHBOURING PARISHES.—A MEETING will be HELD on THURSDAY, the 26th day of November next, by Four o'clock in the afternoon, at Pearce's Hotel, St. Agnes Church-Town, for the purpose of taking into consideration the several PRIVILEGES GRANTED by various CHARTERS, from King Edward the First, and his successors, which have not been repealed. It is, therefore, desirable, that the claims of the labouring Tinners should be protected, and the Charters re-established.

And, also, for taking into consideration the propriety of establishing a FUND for the RELIEF of the DISABLED, INFIRM, and AGED.

WILLIAM HOSKINS, Privileged Tinner.

Dated Beacon, St. Agnes, Oct. 28, 1846. 2

TO LABOURERS.—TENDERS will be RECEIVED by the undersigned for INCLOSING SEVERAL HUNDREDS OF ACRES OF WASTE LANDS, situate in the parishes of St. Agnes and Perranzabuloe, at so much per yard, of 18 feet in length; the fences to be built either with stone or turf.—Specifications and contracts may be seen on application to the undersigned.—Leases also will be granted on Goonvrea Commons, for 21 years, at the rate of 1s. per acre. Preference will be given to the inhabitants of St. Agnes. WILLIAM HOSKINS.

Dated Beacon, St. Agnes, Oct. 28, 1846. 3

MINE SHARES FOR SALE.—FOR SALE, BY PUBLIC AUCTION, at Pearce's Hotel, Truro, on Monday, the 16th Nov. inst., by Four o'clock in the afternoon, the following SHARES in MINES:—

32-256ths in NORTH WHEAL ROSE.
26-256ths in PENHALLOW MOOR.
20-500ths in WHEAL LOVELL.
160-3815ths in WEST WHEAL JEWEL.

Dated Nov. 10, 1846. JOHN TIPPETT, Auctioneer, Truro. 4

VALUABLE AND EXTENSIVE FOUNDRY AND ENGINE WORK, at ALLOA, FOR SALE, for behoof of a sequestrated estate. To be SOLD, by PUBLIC AUCTION, within the Waterloo Hotel, Edinburgh, on TUESDAY, the 17th day of November, 1846, at Two o'clock afternoon, at the reduced upset price of 6000l., and with immediate entry, the ALLOA FOUNDRY and STEAM-ENGINE MANUFACTORY, with HARBOUR, containing ample accommodation, and every facility for carrying on the business of iron founding, steam-engine making, and iron steamboat building, on an extensive scale. The premises cover nearly two acres of ground; the buildings are substantial, being constructed of stone within a few years. They are peculiarly well-situated for supplies of iron and coal. The machinery, utensils, and patterns, are of best and most useful kind, and in excellent order.

A detailed description of the works (which are in operation) was inserted in this Journal, of 17th instant; and for further information, application may be made to Mr. Brydie, banker, Alloa; Messrs. Lockhart, Hunter, and Whitehead, W.S., 84, Great King-street, Edinburgh (who are in possession of the titles); or to Mr. Muir, 17, Quality-street, Leith, Trustee on the Estate.—Leith, Oct. 29, 1846. 5

MINERALS, on the ESTATE of COMRIE, PERTHSHIRE FOR SALE.—TO BE SOLD, BY PRIVATE CONTRACT, about TWO HUNDRED and FORTY-THREE imperial acres of FINE COAL, and FIRST-RATE BLACKBAND IRONSTONE (fully equal in quality to the Monkland Blackband, within the Estate of Comrie, in the county of Perth, on the south side of the turnpike-road leading from Alloa to Dunfermline, 8 miles from the former, and 6 miles from the latter, town—within 3 miles of the Forth, belonging to Andrew Clarke, Esq., of Comrie.

The blackband is worked on the same estate, within 130 yards, by the Forth Iron Company, who have paid £19,000 for the minerals they have purchased on the northern part of the Comrie estate, and whose extensive furnaces are erected on the spot.

At a time when Scotch iron is in such great demand, and which, no doubt, will continue for years to exist, both for home and foreign consumption, a more safe and advantageous opportunity for realising a large capital, by a moderate investment, perhaps never occurred, especially as the supply secured by the Forth Iron Company is limited; and the remaining minerals being those in the southern part of Comrie, at present offered for sale, are now, therefore, and must still more eventually be, increased in value.

Mr. John Williamson, mining engineer, Viewforth, Lasswade, near Edinburgh, certifies that the blackband exists in a large area on the south side of the turnpike-road—that the quality of the blackband is equal to any in Scotland—in thickness about 2 ft. (proved now to be 2½ feet thick)—and five seams of coal, or more, averaging from 3 to 6 feet—and that the ironstone can be worked as cheap, if not cheaper, than any in Scotland.

Mr. Scrivenor, whose work on the iron trade is well known, certifies the remaining portion of the Comrie minerals to be of great value—a valuation that must be much enhanced by the Stirling and Dunfermline Railway, which will skirt the whole southern boundary of the coal mineral field; while the value of the minerals in question were proved in evidence before a committee of the House of Lords, last session, by the most eminent engineers, during a contest between Mr. Clarke and the Stirling and Dunfermline Railway Company.

For farther particulars apply to Robert Baxter, Esq., Doncaster; H. Scrivenor, Esq., Stock Exchange, Liverpool; Robert Somerville, Esq., Writer to the Signet, 22, Dublin-street, Edinburgh; and the proprietor, Andrew Clarke, Esq., 27, Bedford-sq., Brighton. 6

COLLIERY PROPERTY.—PARTNER WANTED— A PERSON, who has the DISPOSAL of COLLIERY PROPERTY, in the FOREST OF DEAN, upwards of SEVEN HUNDRED ACRES in extent, wishes to meet with an individual as PARTNER, who can command from £3000 to £6000. The property may be worked in three distinct collieries, and a great part of it is already drained by a level, and a much greater part may be drained at a moderate expense, and the coal extracted by the same level, thereby saving the great cost of steam-engines to pump the water, which are required in the case of greater part of the collieries in the Forest of Dean. On the part already drained the coal may be raised at a much less cost than where steam-engines are used—thus ensuring a highly remunerative profit. The above collieries are galed to Coleford Hill Delph Vein of Coal, which is the thickest stratum in the forest; the coal is also of very excellent quality for domestic uses—for cokes—for railways—and other purposes. The colliery properties lie in the best possible position in the Forest, and are contiguous to Pullo Pilo Wharf and the Severn and Wye Railway. The Hereford and Gloucester Railway, part of the Great South Wales line, will also be near the property. Any one who should be inclined to accept the above offer, will be allowed to choose whether he would become equally interested in the property with the advertiser, or only to some extent, according to his capital, but no offer will be accepted where the capital to be brought will be less than £3000. A person will be preferred who would take an active part in the management and conduct of the collieries. The advertiser will allow a partner to purchase a certain part of the collieries, which may be worked conjointly with the remainder held in partnership.

For particulars, apply to Hr. Henry Foley, solicitor, Worcester; Mr. Bonner, solicitor, Gloucester; Mr. R. Jakeman, land agent, &c., Gloucester; or to Mr. Joseph White, Lord's Hill, Coleford, Gloucestershire—the later of whom will show the property. 7

GLENKENS LEAD AND COPPER MINES, KIRKCUDBRIGHTSHIRE.—In consequence of MINERALS, of considerable value, having been found on the ESTATES in which the GLENKENS MINES are situate, an Act of Parliament has been obtained, to enable the trustees to GRANT MINERAL LEASES. These mines are situated in the centre of a mineral country, and in the vicinity of the flourishing lead works of Carsphairn, Lead Hills, the Newton Stewart, and Heston Island Copper Mines, the Kirkcudbrightshire Mining Company's works, and others in that part of Scotland.

The proprietor has been, for the last two years, exploring and opening the ground; and five promising lodes have been proved, which are now being opened and extended by Cornish miners. There being every prospect of a most satisfactory result at an early period, as appears from the reports of the several mine agents who have inspected the lands, as also of the captain now superintending the works, a company is being formed, to give the mines a fair trial, on the principle of the Cost-book System, by dividing the interests into 1000 shares, of which some few still remain unappropriated.

Plans of the sett, comprising about 1200 acres, and the several reports, may be seen, and every information obtained, at the offices of Messrs. Bullock and Luscombe, No. 35, Lincoln's Inn-fields, to whom applications for shares must be made. 8

THE PATENT SAFETY FUSE, FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDITIOUS MODE of effecting this very hazardous operation. From many testimonies to its usefulness with which the manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.G.S., &c.:—"I am very glad to hear that my recommendations have been of any service to you; they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."

Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY Camborne, Cornwall. 9

UNITED HILLS MINING COMPANY.—Notice is hereby given, that the SCRIPHOLDERS of this company, intending to take NEW SHARES, pursuant to the resolutions of the special general meeting of the company, held this day, must deposit in the office of the company, No. 5, Adam's-court, Broad-street, their SCRIP SHARES, and PAY the sum of £2 10s. for each new share allotted to them, on or before the 12th day of December next, otherwise they will forfeit their right to have such new shares. Every shareholder will be entitled to one new share for every four scrip shares so deposited and paid upon. By order of the board,

Nov. 12, 1846. JAMES SMITH, Secretary. 10

UNITED HILLS MINING COMPANY.—At a Special General Meeting of shareholders, held at the offices of the company, 5, Adam's-court, Broad-street, on Thursday, the 12th December, 1846,

ROBERT CLARKE, Esq., in the chair.

The advertisement convening the meeting, with the reports of the directors and agents, were read.

The following resolutions were unanimously carried:— 11

That the report of the directors be received and approved.

That, for the purpose of raising further capital, 1200 new, or additional shares, of £5 each, be created, and that such shares have all the rights, privileges, and advantages of the present shares, but without any priority in payment over the same; and that, in the first instance, such new, or additional, shares be allotted to, and apportioned amongst, the present shareholders, according to their number of shares, in the proportion of one new, or additional, share for every four shares held by them; but that, in such apportionment, no notice be taken of any less number of shares than four.

That, to entitle himself to such apportionment, each shareholder shall deposit with the secretary of the company his requisite number of scrip shares, and also pay, on or before the 12th day of December next, the sum of £2 10s. for every new, or additional, share to be allotted to him, in pursuance of the above resolution.

That the shares not taken up and paid for on or before the 12th day of Dec. next, be first offered, on the same terms, to any other of the holders of the present scrip shares willing to accept the same, and paying such sum of £2 10s. a share, on or before the 24th day of December next.

That, after such 24th day of December next, it be in the discretion of the directors to sell from time to time for the benefit of the company, all or any of the new or additional shares not then paid upon, or taken up by the present proprietors at such price as to the directors may seem expedient, being not less than £2 10s. a share.

That the directors be fully empowered to carry the above resolutions into effect, and that such resolutions be appended to the Deed of Regulations, and henceforth form part thereof.

That the thanks of the meeting be given to Capt. W. Richards for his attendance, and the explanations afforded by him. ROBERT CLARKE, Chairman.

That the thanks of the meeting be given to the chairman for his services, and that gentleman, and the other directors, for their general attention to the affairs of the company. JAMES SMITH, Secretary.

WHEAL HOLWELL MINING COMPANY.—At a Meeting of the adventurers in Wheal Holwell Mine, held at the offices of James Crofts, Esq., 4, King-street, Cheapside, on Tuesday, the 10th Nov., 1846, pursuant to circular,

JOHN EDWARDS, Esq., in the chair.

The circular convening the meeting having been read— 12

The cost-sheets for the months of May, June, and July—amounting to £107 17s. 4d.—were submitted to the meeting—whereupon it was

Resolved unanimously,—That the rules, or regulations, for the government of the affairs of the company, submitted to this meeting, with the several alterations and additions thereto now agreed upon, be approved, and that the same be entered in the cost-book of the company.

Resolved unanimously,—That a finance committee be appointed, and that the following gentlemen be nominated as members thereof, who shall be considered as holding office until the next meeting of the adventurers, and to whom the accounts of the company be referred; the finance committee so appointed being composed of Messrs. John Edwards, John Hays, W. C. Hall, J. J. Jerdein, Jos. Pickering, Thomas Ruston, Charles Harris, and J. Coulthard—three of whom shall form a quorum.

Resolved unanimously,—That, with reference to the cost sheets, this day submitted to the meeting, that the same be referred to the finance committee appointed this day, and that their attention be particularly directed to certain items, of which such accounts are composed, and which they consider not warranted; and, moreover, that the committee do cause an early meeting to be held, with the view of affording to the adventurers the opinion entertained by them, and taking the decision of the adventurers on the future course to be observed with relation thereto.

Resolved unanimously,—That an account be opened with the London and Westminster Bank, on behalf of the adventurers.

Resolved unanimously,—That a call of 5s. per share be now made, and that the same be payable on or before the 13th Dec. next.

Resolved unanimously,—That James Crofts, Esq., be appointed secretary,

JOHN EDWARDS, Chairman.

Resolved unanimously,—That the cordial thanks of the meeting be given to John Edwards, Esq., for the services rendered by this gentleman, and more especially for his able conduct in the chair. JAMES CROFTS, Secretary.

WHEAL BARBARA SILVER-LEAD AND COPPER MINE, two miles from the port of WADEBRIDGE, CORNWALL.

Capital £12,800, in 2560 shares, of £5 each.—Deposit 30s. per share.

REGISTERED PURSUANT TO ACT. 13

This mine is in a district long known as productive of silver-lead and other ores; on the east the Treburget Mine has produced immense quantities. The proprietors have driven an adit about 50 fathoms, and sunk a shaft on a large lode, highly productive, depth considered, of silver-lead and copper ores; an assay, by Mr. Richard Rodda, of St. Austell, gave 44 oz. 12 dwts. to the ton of lead, and other lodes are known to exist within the sett.

The proprietors retain one-half of the shares, free of deposit, but subject to calls, as consideration for the property and cost up to August last—the remaining 1280 shares pay the deposit of 30s. each, to provide the engine, and to carry on the works, which the proprietors confidently expect will shortly become profitable.

About one-half of the 1280 shares are yet to be appropriated, for which application may be made to the directors, at the company's office, 8, Gresham-street, London, where reports, prospectuses, maps, specimens, leases, &c., may be seen.

8, Gresham-street, London, Nov. 12, 1846.

WHEAL CURTIS COPPER MINING COMPANY, in the PARISH OF CROWAN, NEAR CAMBORNE, CORNWALL.

In 6000 shares, of £4 each.—Deposit £1 10s. per share.

PROVISIONAL DIRECTORS.

GEORGE PILKINGTON, Esq., C.E., late Captain Royal Engineers.
GEORGE EVANS, Esq., C.E.
MARTIN STAPLEY, Esq., Homerton.

(Other directors will be shortly published.)

BANKERS—Messrs. Cunliffe, Brooks, Cunliffe, and Co.
SOLICITOR—Henry Bull, Esq.
SECRETARY—E. Mills, Esq. 14

This mine is in its infancy, the shaft being now only at the depth of 47 fathoms below the adit; nevertheless, it has already produced upwards of £10,000 by its copper ore, one-half of which sum the late Mr. Thomas Teague, of Redruth, the celebrated mining captain, who worked this mine at his own individual cost, appears to have expended in carrying on the works, so that by reason of his decease the mine left in the hands of the executors was abandoned at the very point to which his hopes of wealth had been directed, and at a time when she was (according to Mr. Nicholas Vivian's and Joseph Vivian's report, as printed in prospectus) very productive. They also say, "it is our decided opinion that a valuable and profitable mine will be found if prosecuted to deeper levels." These gentlemen (the Vivians) are so well-known that their opinions are relied on by those accustomed to mining operations.

To follow up the foregoing opinions, it is necessary to fork the mine, and to sink a new shaft to the westward of the present one, directly over a rich bed of ore mentioned in the report of Capt. Richard Rowe and Mr. Henry Thomas, F.G.S., as in prospectus, and to open new and deeper levels, as well as to work effectually those already made, which Capt. Teague's decease prevented him accomplishing, and to carry on which works a powerful 70-inch engine has been required; therefore a company has been provisionally formed to carry out these objects, for which purpose it has been determined to distribute the interest of this mine into 6000 shares of £4 each.

A deposit of 30s. is required to be paid on each share, and it is expected that no further portion of the £4 will be necessary.

Of the 6000 shares referred to, 3000 have been taken and paid on by the promoter of this company, who has thus given the best possible proof of his opinion of the prospect of valuable remuneration to adventurers; and of the other 3000 shares 1000 only remain to be allotted, since the issue of the first prospectus.

No call shall exceed the sum of 5s. per share. No responsibility will attach to any shareholder beyond the deposits paid, and the calls to be made on the shares: this to be secured by registered deed of settlement, as well as law and equity can devise.

There are six lodes in this sett, each considered equal in value to that of the neighbouring mine, called the Wheal Abraham, which yielded £300,000. Therefore £1,800,000 may be taken from this mine by well-directed energy.

It is a well-known fact that shares in mines recently opened under inferior prospects to those which Wheal Curtis presents, were purchased at as low a price as those now offered to the public, and have since realised £500 and upwards per share; and such is the confidence of the committee in the capabilities of this mine that they have taken upon themselves to purchase at auction the splendid 70-inch engine of the Hallenbeagle Mine, its boilers, pumps, and other materials, by which £1000 at least have been saved to the company. They are also pushing forward the proposed works with vigour, the progress of which since the first prospectus is stated in the second one.

Applications, with respectable reference, for the small proportion of shares remaining, as above stated, will not be received after the 1st December next. All letters for shares to be addressed to the offices, Gresham House, Basinghall-street, to

E. MILLS, Secretary, pro tem.

MR. W. H. DAUNT, No. 20A., ST. ANN'S-STREET, MANCHESTER, has always ON SALE PIG-IRON, RAILWAY BARS, CHAIRS, &c. &c. 15

WILSON & FRASER, 2, WELLINGTON-BUILDINGS, LIVERPOOL, and 13, EXCHANGE-PLACE, GLASGOW, have always ON SALE PIG-IRON, BAR-IRON, RAILWAY CHAIRS, and RAILWAY BARS. 16

WILLIAM FOX AND SON, No. 53, CASTLE-STREET, LIVERPOOL, have always on SALE PIG-IRON, RAILWAY BARS, CHAIRS, and IRON of every description.—TIN PLATES, WIRE, &c. 17

MINING OFFICES, 1, ST. MICHAEL'S-ALLEY, CORNHILL, LONDON.

WATSON AND CUELL, MINE AGENTS.— N.B.—STATISTICAL INFORMATION furnished (on application) to SHAREHOLDERS in MINES in Cornwall, Devon, Scotland, Ireland, Wales, and Spain. 18

MR. JOHN CHAPMAN, ACCOUNTANT, MINE AND GENERAL AGENT, 17, OLD BROAD-STREET, ROYAL EXCHANGE. Returns his grateful thanks to his friends for the countenance and support he has received from them since he commenced business. He begs leave to acquaint his friends, that he now also undertakes the BUSINESS of ACCOUNTANT, in which branch he hopes to receive additional favours from them.—Nov. 4, 1846. 19

MINING PROPERTY.—CAPITALISTS who are disposed to INVEST in CORNISH and FOREIGN MINES, will find the present opportunity very favourable for so doing. From large sums having been lately diverted from such investments for railway speculations, standard mines are now selling at prices that will pay the purchaser 20 per cent. per annum for his outlay. There are also other mines that are on the eve of paying dividends, which can be recommended with confidence.

Applications to be made to Mr. JAMES HERRON, mining agent, No. 3, Adam's-court, Broad-street, London. 20

MR. R. TREDINNICK wants to PURCHASE 1-70th SHARE in NORTH ROSKEAR, at £300, and 1-94th SHARE in EAST WH. CROFTY, at £275; and to SELL 1-99th SHARE in WHEAL SETON, at £350.

Mining Offices, Three King's-court, Lombard-street, London. 21

MR. T. P. THOMAS, MINING AGENT, and DEALER in RAILWAY SHARES, ENGLISH and FOREIGN STOCK, REMOVED from 80, Old Broad-street, to 18, THREADNEEDLE-STREET, LONDON.—T. P. THOMAS is a BUYER of SHARES in North Roskear, Wheal Seton, Wheal Treiawney, West Wheal Jewel, and Wheal Mary Ann. 22

MESSRS. R. CLARK & CO. beg to acquaint their friends and the public in general, that they have taken OFFICES as below, where they intend to carry on BUSINESS as STOCK, SHARE, and MINING AGENTS; relying with confidence upon the method adopted by them for conducting all business entrusted to their agency, Messrs. R. C. & Co. solicit a continuance of that support it will be, by strictest attention to all orders, their endeavour to deserve.

N.B.—Money advanced upon scrip and other securities.

3, Austinfriars, Broad-street, Oct. 17, 1846. 23

MESSRS. J. PAINTER AND CO., SHAREBROKERS, MINING AND GENERAL AGENTS,
25, *CASTLE-STREET, LIVERPOOL,*
AFFORD EVERY INFORMATION as to the STATE of the MARKETS, PRICES, &c., upon application. 24

MESSRS. LINTHORNE, JONES, AND CO., STOCK, MINING, AND SHARE AGENTS.

*** Every information will be afforded as to the markets and prices of the above, by application (post-paid) at their offices,

48, *THREADNEEDLE-STREET, LONDON.* 25

CHARLES T. CRAPP, SHARE AGENT, *TAVISTOCK.* 26

JOHN HARVEY, SHAREBROKER AND ASSAYER, *LISKEARD, CORNWALL.* 27

JAMES LANE, MINING SHAREBROKER, 75, *OLD BROAD-STREET, LONDON.* 28

WILLIAM TRENERY, DEALER IN RAILWAY AND MINING SHARES.—ESTABLISHED TEN YEARS.
OFFICES, No. 80, THREADNEEDLE-STREET, LONDON. 29

WILLIAM H. SMITH, MINING SHARE AGENT, 10, *WARNFORD-COURT, THROGMORTON-STREET.*

*** SHARES in many valuable MINES FOR SALE, and every information will be afforded, on application. 30

MINES TO LET.—TO BE LET, BY ROYALTY, the COAL and IRONSTONE MINES, under upwards of 100 acres of land, at SWINDON, near HIMLEY.—The Staffordshire and Worcestershire Canal passes through the estate.—For particulars apply to Mr. William Fellows, solicitor, Dudley. 31

UNITED STATES MINES.

COPPER ORE, from the best localities, as Grey, Black Oxide, and Sulphuret.
COBALT OXIDE, yielding from 5 to 80 per cent.
CHROME, yielding from 30 to 47 per cent.
MANGANESE, yielding from 75 to 90 per cent.
LEAD ORE, of the best quality. 32
ZINC, in form of Blende and Calamine.
Likewise, SOAP STONE, WHITE VITREOUS FELSPAR, BLACK LEAD, PURE WHITE LEAD, MICA, in small and large sheets.

THE ABOVE NATURAL PRODUCTIONS may be obtained in any quantity, and on the most reasonable terms, by applying to Dr. Lewis Teuchtwanger, New York City.

ASTURIAN MINING COMPANY.—At a board of directors, held this day, it was resolved to SUMMON a SPECIAL MEETING of the shareholders, to be HELD at the offices, in Austinfriars, on Monday, the 23d inst., at Twelve o'clock precisely, for the following purposes:—

1. To submit the recent import and official report on the company's cinnabar (quicksilver) mine.
2. To hear the report on the present state of the iron-works and coal mines. 33
3. To take into consideration the disposal of the unappropriated shares.

Although, by the constitution of the company, none but registered shareholders are entitled to vote at a public meeting, yet the directors invite all holders of 10 shares and upwards, on which the calls have been paid, to attend the above meeting.

A list of shares liable to forfeiture from non-payment of call will be laid before the meeting. By order of the board,

No. 9, Austinfriars, Nov. 6, 1846. K. MACKENZIE, Secretary.

CONSOLIDATED TRETOIL MINING COMPANY.—The directors of this company hereby give Notice, that the QUARTERLY GENERAL MEETING of the shareholders will be HELD at these offices on Thursday, the 26th inst., at One o'clock P.M. precisely. HENRY THOMAS, Secretary. 34

Mining Offices, 8, George-yard, Lombard-street, London, Nov. 10, 1846.

VICTORIA TIN MINING COMPANY.—NOTICE.—The directors are proceeding with the allotment of shares in this company; but, in consequence of the great number of applications, the letters of allotment cannot be issued until Saturday next, the 14th Nov., 1846. By order,

1, Copthall Chambers, London, Nov. 11, 1846. W. H. SMITH, Secretary. 35

GENERAL MINING COMPANY FOR IRELAND.— Notice is hereby given, that a GENERAL HALF-YEARLY MEETING of the shareholders of this company will be HELD at 2, Burgh-quay, Dublin, on Monday, the 7th of December next, at the hour of Eleven o'clock in the forenoon, to receive the half-yearly accounts up to the 5th October last, and the auditors' report thereon, and to transact the general business of the company.—To elect nine directors for the ensuing year—the ballot for which will commence at Eleven o'clock in the forenoon, and close at Three o'clock in the afternoon, of the above day. By order,

Nov. 10, 1846. THOS. J. QUINTON, Vice-Chairman. 36

MANAGER WANTED, by the EAST OF SCOTLAND MALLEABLE IRON COMPANY (Capital £100,000), to SUPERINTEND the ERECTION of their WORKS, and take a GENERAL MANAGEMENT of the company's affairs. None need apply who has not had experience at similar works in England or Scotland.—Applications to be lodged with Mr. James Smith Rennidson, the interim secretary, at Dunfermline, on or before the 30th inst., when they will be laid before the directors for consideration.—Dunfermline, Nov. 5, 1846. 37

NOTICE TO THE MANAGERS OF MINING COMPANIES, SMELTING WORKS, &c.

Mr. MITCHELL (late Ritchell and Field) begs to announce, that ASSAYS and ANALYSES of all descriptions of ORES, MINERALS, and FURNACE PRODUCTS, are conducted at his LABORATORY, 28, HAWLEY-ROAD, KENTISH TOWN, to which direction all communications are to be addressed.

N.B.—Instructions to all branches of assaying and mineral analysis as usual. 38

IMPROVEMENTS IN THE CONSTRUCTION OF BRIDGES.

[See preceding Diagram of Mr. Motley's proposed Bridge.]

RESPECTED FRIEND,—Agreeable to your desire, I herewith furnish you with my observations on the subject of the above engraving, made on the scale of $\frac{1}{48}$th of an inch to 12 ft., representing a span of 624 ft., which is a near representation of my first project for a bridge at the St. Vincent rocks, at Clifton, near Bristol, across the River Avon, at an elevation above high water mark of upwards of 200 ft., proposed to be constructed entirely of wrought iron—excepting, of course, the floor or roadway—a model of a moiety of which proposed bridge I constructed about 12 years ago, on the scale of one inch to the foot; consequently, it was nearly 25 feet long—the bars of which were $\frac{1}{16}$th diameter, about the size of an ordinary quil, in lengths of from 10 to 12 in.,—and, including bolts, nut-screws, plate, &c., contained nearly 20,000 parts: when completed, the whole formed a kind of bracket, presenting the appearance of a crane—the arch springing at a depth of 80 inches from the roadway; and, notwithstanding its delicate parts, it would sustain a uniform load of more than 30 cwts., making but very little sensible deflection, which is more than four times its own weight; it would sustain the weight of three persons at the extreme end, without deflecting three fourths of an inch. The model, which cost upwards of 100 guineas, was publicly exhibited at Bristol, and excited very general approbation; and the plan was submitted to the directors of the proposed suspension bridge, as a substitute—but I was unable to prevail upon them to adopt it: consequently, all the labour and expense was lost, as the exhibition barely covered the expense of attendance.

The plan was submitted to many eminent engineers and mathematicians of the day—among the latter, the late Davis Gilbert, Esq., president of the Royal Society (who was previously engaged to decide on the plans formerly submitted), the late Dr. Elrington, Bishop of Ferns, Dr. Lardner, and the late Dr. Birkbeck, founder of the Mechanics' Institution.—Dr. Lardner said, there could be no disputing the principle, and, therefore, it only required a practical engineer to calculate and determine the required dimensions of the several parts to bear the thrust and traction of itself and its load, and all of them fully concurred in Dr. Birkbeck's views, who, after a careful examination of it a second time, wrote me as follows:

38, *Finsbury-square, Dec.* 16, 1834.

DEAR SIR,—Your projected bridge, in its more perfect form, I have again examined with great pleasure, and with increased conviction of its fitness, for the singular position which it is intended to occupy. Considered in relation to its mechanical principles, and its sustaining power, the arch which you propose to construct is most satisfactory, and will, I am persuaded, combine in a *higher degree than has ever yet been effected*, elegance, lightness, stability, and magnitude of span. Nothing can be more conclusive, with respect to its mechanical character, than the convenient and economical fact, that it will be erected securely without centering; and that the approximating halves will not depend in any material degree, for their own support, or for the support of any load which may be placed upon them in any resistance at the vertex. Every portion of each half of the bridge becomes, as it is finished, a bent lever; and the whole of each half, consequently, may have its power determined by considering it as a series of such levers, or as one very extended lever, of which the line of abutment is the shorter extremity. It is obvious, however, when the lines of pressure are traced, that in this particular arrangement, traction, to a considerable extent, occurs; and that, therefore, the diagonal braces, occupying the parts of an ordinary bridge, for the purpose of resisting the thrust of the upper portions of the arch, by their weight, alone afford essential support, without loading the arch at all. In this application of the solid sides of the space, is to be found, I apprehend, one material principle upon which the extraordinary lightness of your mode of construction depends. The most accurate attention which I have been able to direct to the examination of your intended bridge has not enabled me to discover any well grounded objection to it; and assuming the sufficiency of the abutments, both for thrust and traction, the adequacy, by trial or calculation, of the substance of every part and their junctions, and the excellence of the strong tenacious elastic material you propose to employ, *the firmness and security of the fabric cannot be disputed*. With these views of the essential qualities of the arch, and my admiration of its appearance, as stretching across the valley, at once beautiful and romantic, of the Avon, I cannot but entertain a very ardent wish that they, upon whom rests the decision, may be induced to adopt it. The structure will, I am persuaded, do honour to the present advanced condition of practical mechanics, and the taste of the influential inhabitants of Clifton and Bristol, and will even prove ornamental to natural scenery, of a description so splendid as to render almost unendurable the ordinary ponderous productions of art. That you may succeed is the belief, not less than the wish, of Yours, most faithfully, GEORGE BIRKBECK.

Mr. T. Motley.

P.S.—It has been maintained that, with an equal weight of iron, your arch is as strong as a chain bridge; it has been asked, what would be the case if the weight were greater? To this it may be answered, that the strength would in the same proportion be greater. Expansion and contraction would, of course, in such a structure as has been proposed, take place to a considerable extent; but without any damage, or even inconvenience, provided the junction of the two halves of the arch were effected, with reference to this alteration.

An improved plan, of which I made a small model, about 8 feet long, of an entire structure in two parts, to be separated at the middle, so as to show the principle—and which model I have now by me—I again submitted to the directors of the proposed Clifton Bridge, and, through the kindness of T. Kington, Esq., who was chairman, I got it entertained at the following meeting of the board. The model was at Harford and Co.'s iron warehouse; and T. Kington, Esq., and several of the directors, accompanied by I. K. Brunel, did me the favour of meeting me there. After a considerable discussion, and after combating and removing some trifling objections, I. K. Brunel expressed himself in a very handsome, gentlemanly manner; and I take this opportunity of testifying to his honourable conduct on the occasion; he observed to this effect—"That if the plan be approved of, and the directors are disposed to adopt it—and Mr. Motley can procure a responsible party to undertake its erection—I will only say, that as far as I am personally concerned, I will be no obstacle in the way." This was generous, as it conditionally absolved the directors from the obligation to him as their engineer, which might, otherwise, have been a considerable difficulty; yet, notwithstanding the hopes that this circumstance and interview inspired, I never heard further on the subject—this, I believe, was before the existing towers were constructed. I may here observe, that I never desired or expected (which I often expressed at the time) to supplant I. K. Brunel, which would have been dishonourable, should the design be adopted—because, perhaps, there is not an engineer in the kingdom better able to direct the construction of such a fabric, founded as it is on the principle which T. Telford, Esq., proposed to form a centering, on which to construct a cast-iron bridge at Bangor, and the brick arch, constructed by Sir M. Brunel, at the Thames Tunnel, some years ago, thinking that it could make no difference to him what kind of structure it was, seeing that suspension bridges did not originate with him, and that, therefore, it would be quite immaterial to him whether it was on the principle of suspension, or upon the compound principle I had proposed; and, as regards myself, I should have been, and still shall be, perfectly content to receive from the directors such acknowledgement and compensation as they, in their judgment, might think me entitled to, and thus all difficulty relative to rivalship would be completely obviated; nor would I, upon any consideration, accept the offer of engineer to it, whatever might be the value of such an appointment, if it was to supersede I. K. Brunel against his wishes or consent.

I will now proceed briefly to describe the mode of construction and combination. It will be readily seen that the structure is a compound of the principles of tension and compression—the upper or road line being tension, pulling from the rock, the arch line pressing against the rock or abutment, and all the diagonal, vertical, and horizontal bars, alternately acting in like manner. The junctions of the several bars are effected something like the spokes of a wheel—viz.: by strong circular plates of wrought-iron, about 1 in. thick, one on each side of the junction; in the middle, between the plates, is a small octagon cast-iron plate, against which the end of each bar is made to but these; each bar is secured by a strong bolt, passing through the prepared end of the bars, connecting the two plates—through the middle of which, and the octagon cast-plate, passes a strong transverse bar or bolt—the whole combination being similar to a wheel and axle—and the whole system is thus united, excepting the arch and road line; these are connected in the usual way—viz.: by brace plates, bolts, and nuts, or by gibs and keys. I think this description will be sufficiently clear to any mechanical mind, as to require no further information on that head.

I will now proceed to describe the manner of erecting it; I propose to insert in the surface of the rock, at a distance of 80 ft. or 100 ft. from the river side, the required number of strong wrought-iron piles, unitedly sufficient to bear the strain of several thousand tons, and firmly to attach to the heads of these piles the tension or road line, continuing to the edge of the rock, or abutment, under the roadway: I then propose to construct a platform, 60 ft., 80 ft., or 100 ft. long, to run on friction wheels; on the river end of which to construct a series of powerful cranes—the land end of such platform to be loaded so as to counterbalance the weight of the hanging scaffold, &c.; this hanging platform, or scaffold, to be made 8 ft. or 10 ft. longer than the width of the bridge, and 8 ft. or 10 ft. wider than one of the divisions of the structure (12 ft.), so as to allow ample room for the men to work in, properly fenced round to prevent accidents; the cranes, of course, to project sufficiently to enable the hanging platform, or box, to descend clear of the rock, or abutment, to the depth needful to erect the first portion of the road line, by connecting with the land ties the first portion of the upper line extending from the rock, and these fixing thereto the several vertical, horizontal, and diagonal bars, in manner described,—the first portion for the whole breadth of the bridge being complete, the scaffold is lowered down, to attach the bars in like manner, and so on, until the first section of the bridge, with its portion of the arch, is completed: in the meantime, the flooring is laid on, to which the crane platform, or machine, is propelled: the hanging scaffold is then drawn up, to enable the same process to be continued—and thus, by a simultaneous movement on both sides of the river, the two parts meet in the middle; having so met, I propose strong iron staples on each side of the ends of the road line and ribs of the arch, by which means the two halves may be united by strong iron bolts, or bars, of sufficient length, to allow of contraction and expansion, and thereby remove or prevent the danger which might otherwise happen.

Upon a careful examination, I estimate that this structure—say, 630 ft. long and 50 ft. wide—might be erected for about 20,000*l.*; at all events, I feel very confident that responsible parties might be found willing to complete the iron and wood work in a handsome and substantial manner, of such substance and materials as to sustain an uniform load equal to double its weight, or 1200 tons, which I estimate would be 4 times the weight of a loaded railway train of that length, for not exceeding 25,000*l.* I understand, it is estimated that from 30,000*l.* to 40,000*l.* will be required to complete the present intended suspension bridge. If that is the case, then I cannot but think it will be wise and advantageous for the directors to alter the plan, even if the one now proposed should cost 30,000*l.*; and as the iron they have prepared, as well as the masonry, except the towers, may be all made available to the plan I propose, I most respectfully submit it to the attention and consideration of the worthy directors, to my fellow citizens, and the inhabitants of Clifton and Bristol, who may feel an interest in the affair. THOMAS MOTLEY.

3, *Belvedere-road*, 11*th mo.*, 12*th.*

P.S.—Having the last fifteen years devoted my attention to the construction of bridges with wrought-iron (indeed, I have made it a principal study), I feel assured that I have acquired a pretty accurate knowledge of the proper form, dimensions, and quantity of materials, required to sustain given loads. I, therefore, feel confident in stating, that a metropolitan bridge—say, at Lambeth—might be *substantially* constructed in five spans, of about 160 ft. each, which, including the piers, would make it about 850 ft. long, with 4 ft. squares, so as to present an appearance closely resembling the above engraving, 40 ft. wide, of such strength as to support with perfect *safety* 1 *cwt. upon every square foot of surface*, complete, exclusive of the approaches, under 50,000*l.* less than half the cost of the Hungerford Suspension; and a foot bridge, same length, 20 ft. wide, under 35,000*l.*

NATIONAL ATMOSPHERIC RAILWAY SYSTEM.

SIR,—As promised in my last, I now enter into some of the details of my proposed plan. When the possibility of deriving from natural sources the original power, requisite for the universal application of the atmospheric principal, had been conceived, the great difficulty to be overcome, was the invention of machinery adapted for deriving power from such fluctuating sources—wind and water-mills, as they are at present constructed, being perfectly inapplicable. For this purpose, various kinds of machinery and modes of operation have been thought of, most of which at first appeared adapted for the purposes required; which, however, on minute investigation, were found to be, from one cause or another, defective; either they were too complicated, or too expensive, or they were incapable of securing from the sources for which they were intended, the greatest amount of available power; but, having imbibed rather largely of the belief, that "patience and perseverance will overcome any difficulties," I have pursued the investigation of the means by which the desired result could be realised, with unabated confidence of ultimate success. At length, it occurred that it was possible to have an expanding air-pump, or a pump with moveable top and bottom ends, and a crank to shift—so that, by regulating the length of the stroke to the power of the machine, any supply of original power, much or little, would be made available: this idea had no sooner been conceived, than the practicability of it became evident. Let us first consider, how the crank may be shifted, so as to give any required length of stroke, *without stopping the engine.* Suppose the longest stroke required to be 10 feet, and we have a crank of the same length, or a little longer, with a piston attached at each end, the crank to be hollow—*i. e.*, to have a hole through it lengthways, and through each piston—which should be accurately fitted to two cylinders, each a little more than 5 ft. long—these cylinders to be fixed in a straight line across the centre of the crank-wheel; the open end of one cylinder will be near the centre of the wheel, and that of the other about 5 feet from it—so that the crank handle may be set at any distance from the centre of the wheel, not exceeding 5 ft. In the centre of the crank, where the handle was to be fixed, should be a strong piece placed across the crank at right angles, for the purpose of keeping the crank handle perpendicular to the plane of the wheel—the ends of this piece to work in groves, or some other contrivance, to keep them in their proper places. A key, like the key of a stop-cock, to be placed through the centre of the handle of the crank across the hole communicating with the cylinders; a valve to be placed in the hole of this key, and stops to be provided, to prevent the key from being turned more than half a revolution—so that the key may be set for the valve to open toward either cylinder, as may be required; the space left in the cylinders, when the crank is in its place, to be filled with oil, or some other incompressible liquid—so that the crank could not be shifted, without the liquid being allowed to pass from one end to the other. Now, when the crank turns round, it will press alternately on the liquid in each cylinder; and, if a longer or shorter stroke is required, we have only to turn the key in the proper direction, and, when the proper length of stroke has been obtained, the cock may be shut until further alteration becomes necessary. It will be seen that the valve in the key will prevent the liquid from going in the wrong direction; and, by reversing the key, it will be made to pass either way. There are other details connected with this arrangement, which will be explained on some future occasion.

We will now pass on to the consideration of the means, by which an alteration in the length of the cylinder of the air-pump is to be effected; this will be performed by an arrangement very similar to that of the crank. Suppose the ends of the air-pump to be supported by pistons in small cylinders, outside the cylinder of the air-pump—say, each end to be *supported* on two pistons, and each to have two pistons to prevent it from *rising.* Let there be pipes to communicate between the *bottoms* of the cylinders, in which the pistons of the upper end are supported, and the *bottoms* of those in which the pistons of the lower end are supported; and also let pipes communicate between the *tops* of those cylinders, for preventing the ends from rising—these pipes to be provided with stop-cocks, similar to that of the crank—the cocks to turn simultaneously. If these ends of the cylinder were of equal weight, the power to move them would only be equal to the friction, as one would balance against the other; the crank being set at the proper distance from the centre, the piston, as it rose and fell, would set the ends of the cylinder in their proper places; perhaps, it is not quite clear how the ends of the cylinder will be brought nearer together by the rising and falling of the piston; but, if we were *pumping* air, the superior external pressure would, if the cocks were turned in the proper direction, force the ends inwards. There are several other details of a novel kind connected with this part of the arrangement, which will also be explained on a future occasion. Although it has been shown that the length of stroke *can* be altered, without stopping the engine, it is not contended that it would in practice be *desirable* to do so; that must be left for experience to determine. The above description of air-pump would be used principally for wind engines, where it was intended that the engine should be employed for both purposes—*i. e.*, compressing, or rarefying, air. A much less expensive air-pump could be employed where the engine was intended *only* for rarefying air, and one which would require neither piston, boring, nor turning—in which there would be *no* leakage, and but little friction, and in which the effect of caloric would be neutralized: this cylinder requires but little explanation. We will suppose a case, for the purpose of illustration:—Suppose, then, we have two cylindrical vessels, each having one end closed, and one is large enough for the other to be moved easily up and down inside of it; the largest one shall be placed with its closed end downwards, and a pipe shall be passed through its bottom, and communicate with an air-tube, or magazine—this pipe shall be brought up in the centre to the top of the vessel, and shall have a valve to open upwards, and this vessel shall be filled full of water. Let another valve be placed in the top, or closed end of the smaller vessel, opening outwards, and let this vessel be placed, with its open end downwards, inside the other; its weight would cause its valve to open, and allow it to descend, until its bottom rested on the water; this vessel shall now be raised, and its valve will close, and the valve of the pipe will open, to admit the air from the tube. When the vessel was lowered, this air, when it had resumed its natural density, would, of course, pass out through the top valve; in these pumps the cylinder would move up and down, while its water piston would remain stationary. With this kind of pump, also, we may have any required length of stroke, and thereby employ all the power at command; the crank will be altered, as before described, and the cylinder by letting water in or out, as the case may be. The pipe leading to the tubes may be jointed, and made in such a way, that its top end will always keep just above the top of the water, and the water may be kept cold by a constant supply of fresh water. There are a few other matters relative to this kind of pump, to be explained hereafter—the above, it is hoped, will convey a correct idea of what is meant. A water-engine, consisting of a new description of water-wheel, one that will secure the full force of the water, whatever height it may have to fall, and a pair of the above air-pumps, with their necessary equipments, and a wind-engine, consisting of a new and more powerful description of wind-wheel than any yet made, and *one* of the former description of air-pumps, with their appendages, constitute all the variety of engines required for *deriving* the original power, and these may be made in large numbers of the same dimensions, by which a great saving in their cost will be effected, and, whether large or small, the *principle* will be the same; therefore, one set of drawings for each kind of machine is all that will be required.

It will be understood how the *wind*-engines can be worked, as wind-engines, such as they are, have long been in use; it will, likewise, be understood how the *water-engines*, when applied to *waterfalls*, can be used, as water-engines, such as they are, are of common occurrence; but, as it may not be understood how these engines can be applied to derive power from the rising or falling of the *tides*, a little explanation may be necessary. The arrangement which at present appears to me, taking everything connected with it into consideration, to be the best, is as follows:—Let a wall, or embankment, surround an area of ground of sufficient extent; and, when the tide rises, let it cover this area of ground—and let the water be retained until the tide has gone down sufficient to give it a good fall—then let this water be all used before the tide has again risen to any considerable extent: this operation will, of course, be repeated every time the tide rises. The amount of power derived at each operation may be considerably increased by employing a little power, when the tide is up, to raise the water in the inclosed area above the level of "high water;" for every lb. of power so employed, we should have back 20, 30, or 40 lbs.—and no additional machinery will be required, as the water-engine will be adapted either for pumping or raising of water, or for using it as an original power; and, as before stated, it will *always* have the benefit of the *full* height the water has to fall. Now, by the plan being a national one, the whole scheme being conducted under general superintendence, the arrangement would be such as to ensure, at all times and places, an abundant supply of power, which power, it is believed, will not cost more than the mere *interest* of the money would amount to, which *steam*-engines would cost for supplying power to an equal extent. The first thing to be done, to carry out the plan, should be to determine on a national atmospheric railway system—the *close tubes* of these railways should be the veins through which the power would flow; the size of these tubes would vary, according to the quantity of power to be transmitted through them. They should *all* communicate with each other, and the original power should be obtained where it could be had at the least expense; the *traction* pipes should be *semi-cylindrical;* the guide wheels should work against the edges of the bed, or flat bottom, of the tube, and the "flange" should be dispensed with; *oil* bearings should be substituted for metal bearings in all machinery, railway carriages, &c., and every thing should be done with a view to the *future;* and, when the national atmospheric *railway* system was completed, the groundwork for a national *universal* atmospheric system would have been provided—the same tubes, the same machinery, and sources of original power—the same general superintendence—would answer for all purposes: certainly, there would be a difference in *degree*, but not in *kind;* and, long before the atmospheric railway system is complete, every doubt of the universal applicability of the principle will have been dispelled. Railway carriages *have* been drawn between two points by stationary power; farming implements, such as ploughs, harrows, waggons, carts, &c., *may* be drawn in a similar way between two points, by stationary, or semi-stationary, atmospheric engines—indeed, there is no laborious operation in agricultural, manufacturing, or other pursuits, which could not be performed by atmospheric power. To enter, at present, into minute particulars, would occupy more space than the conductors of the *Mining Journal* can afford to spare, and also more time than my means will at present enable me to bestow. Should the public discover that there is anything valuable in what has been partially explained, and wish for a full explanation, it can at any time be given; and it may be proper to state, that none of the inventions alluded to have been fettered by patents; and it is for the public to see, that private individuals do not pick up detached and unexplained parts, and "secure" them for their own individual benefit. Fearing that I have already trespassed too far on your very valuable space, I will now conclude. In my next I will, should nothing transpire to alter my mind, give some explanations respecting the semi-cylindrical railway tube, alluded to above.

Portland Town, Nov. 3. JOHN WESTON.

Mr. WESTON and the UNIVERSAL ATMOSPHERIC SYSTEM.

Sir,—I have been for some time a near observer of all inventions for producing locomotion through the medium of air, compressed or otherwise; and nothing has so much astonished me as the continual suggestion, and even patenting, of methods before patented, or well known, without, seemingly, any care whatever having been taken to ascertain their novelty. With regard to the atmospheric railway, that universal patentee, Mr. Pinkus, took out in the year 1841, a patent for an invention, almost identical with that of Mr. Nairne, for atmospheric propulsion, described in your last Number, which he called the Differential Atmospheric Railway. Two years ago, he took out a patent for an invention which has been lately described in the *Mining Journal*, patented by two persons within the last half-year, and claimed by several—viz.: atmospheric propulsion, without a valve, by means of covering the longitudinal slit in the tube, by an elastic and somewhat loose material, constructed of leather, caoutchouc, and copper plates, which was pressed upon by a wheel attached to the carriage outside, and raised inside by a wheel attached to the piston rod. One of his first patents, too, was for propelling without a valve, by an electro-magnetic communication between the piston and the carriage. I ought to have ended, instead of begun, with these instances of reinvention, for I was led to address you by the perusal of Mr. Weston's remarks in your last Number. The use of compressed air, instead of steam, in locomotive carriages, has already been patented in this country to my knowledge five times—first, by Mr. Samuel Wright, in April, 1828, who heated it also before its admission into the cylinders; next, on the 29th of the same month, by Mr. Charles Bompas, to be used expansively as Mr. Weston suggests; next, by Mr. W. Mann, in June, 1828, for precisely the same invention; next, in 1841, by a Baron Von Rathen, in whose patent is included a peculiar method for compressing the air without loss of power, and a plan for admitting the air into the cylinders at an uniform pressure—he also, of course, working it expansively; and, lastly, by Mr. Parsey, in October, 1844—his invention, also, contains a method for regulating the pressure of the air, before admitting it into the cylinders, the same as that of the last patentee, and some contrivances for using the same compressed air several times over. There may be, for aught I know, other patents for the same invention; these, however, are quite sufficient to show that this ground is already occupied. As to the employment of the wind and the tide as first powers, if Mr. Weston will refer to two pamphlets, called "*Etzler's Paradise within the Reach of all Men*," and "*Etzler's Mechanical System*," the first published in 1842, by Cleave, and the latter, in 1841, at Philadelphia, by Stolmeyer, he will see that not only the wind and the tides, but also the waves and the heat of the sun, have been suggested as the only prime powers necessary, and machines for using them in various ways are there described; and I see that one of them, called the "*Satellite*," has been lately tried with success in one of the West India Islands. Indeed, all these powers have been frequently suggested; but those who imagine themselves judges of such matters are of opinion, that steam produced by coal fires is a cheaper power than any of them; I believe, however, an engineer of Liverpool is now constructing a tide-power engine. The number of patents that are bad from want of novelty, is, indeed, quite extraordinary; nor do I see that the present very small publicity given to a specification is sufficient to prevent constant reinvention, nor how to avoid it, except by the establishment of an "Invention Society." I have made the above remarks, however, chiefly to call the attention of inventors in the air locomotive line, to the very great care that is necessary to insure their not having been anticipated.

Nov. 5. Prudentia.

THE "GREAT BRITAIN"—Mr. DE LA HAYE AND Capt. AUSTIN.

Respected Friend,—The letter of "Q.," in the *Mining Journal*, of the 7th inst., informs me, that a patent was obtained a few years since, by Capt. Austin, for raising vessels by means of India-rubber cylinders, inflated with air—a fact of which I was totally ignorant. I was absent from England between 1835 and 1843, except during short visits, and I never heard of it when on the continent; but it seems that Capt. Austin's plan is not very generally known even in England, as several individuals, besides myself, have suggested the same plan for raising the *Great Britain*, and, among these, a correspondent of the *Liverpool Albion*, residing at Cowes. It seems that patentees imagine the public ought to inquire about their inventions, without any trouble on their own part to bring the subject to notice; but, perhaps, Capt. Austin, seeing but little notice taken of his invention, despaired of succeeding in getting it universally adopted; and thus, in some measure, gave up the task of convincing the shipowners of England of the utility of his plan. I will beg permission to suggest a mode of making his invention available in preserving life and property at sea. I would propose that all large vessels should be furnished with two or more cylinders of flexible air-tight material, which, being coiled up as cables, would not take much room; and should the vessel touch aground, they might be inflated with air, and drawn under water by means of ropes passed through pulleys fastened to the keel; the ropes being fastened to the capstan, several men could easily draw the cylinder under water; or, in steam-vessels, the power of the engines might be easily applied to wind the ropes. It is more than probable that, if the *Great Britain* had been furnished with such an apparatus, she would have been got off the shore at the same time, and pursued her voyage across the Atlantic. But there are also other occasions where the cylinders might prove useful—such as keeping a vessel afloat during a storm, as it could not then possibly sink, even if completely waterlogged. It is probable that, in many cases, a valuable cargo might be saved by these means—for it is well known that, during violent storms, it is too frequently found necessary to heave a part of the cargo overboard to lighten the vessel. It is to be hoped that Capt. Austin will bring his invention before the public, so that the details of his mode of operating may be known to shipowners, for few of them will call at the Patent-office for a copy of the specification, or even inquire about it, if there is any difficulty in obtaining information from the patentee. I perceive, by the Liverpool papers, that an American engineer, named Mackintosh, has engaged to raise the *Great Britain* by a novel plan—that of igniting gunpowder under water, near the stern and sides of the vessel. It is supposed that the gunpowder will raise the vessel suddenly, and that it will be drawn off by the steam-tugs at the same moment. This, I believe, is the principle of the plan, and it certainly will be an economical one, if sufficiently safe.—John De la Haye: *Liverpool*, 11 *mo.*, 9*th.*

LAW OF PATENTS.

Sir,—As you have taken up the subject of patents in your last Number, I trust you will persevere with it till a new law is passed. It is, *at present*, perfectly absurd to take out a patent, which is, in fact, only securing a privilege for 14 years *to sue and be sued*. It seldom happens, that a patent is brought to perfection within 10 or 12 years, and then it is, of course, gone from you. I was once engaged in one which was only made serviceable at *the end of the* 14 years, which rendered the patent useless. Lord Brougham, I believe, once intended to alter the law, by giving 30 years for a patent, as is the case on the continent; and, also, to let the Government *protect* patents, on payment of 500*l.*, instead of the present 120*l.* This would be most welcome to patentees; for no one would then attempt to infringe a patent, knowing that Government would pay all the expenses, &c. But unfortunately Henry Brougham became a Peer, and then he forgot all his patriotic intentions, as *he has done* in buying an estate in France to *live on* occasionally. This could not be expected from a Lord Chancellor, enjoying all his property from the taxes of his country. In spite of this expatriating Lord, I hope you will persevere till you induce some genuine legislator to take up the subject of patents, and immortalise himself for the benefit of his country. A Briton.

Maida Hill, Nov. 9.

THE THEORY OF VOLCANOES—CENTRAL HEAT.

Respected Friend,—I perceive, by the letter of Mr. R. Mushet, in the *Mining Journal* of the 31st Oct., that there is still one individual who believes that the centre of the earth is in a state of fusion—an opinion which I thought had nearly expired with Buffon, who asserted that our globe was once melted glass, and had cooled gradually to its present state. That philosopher, however, did not inform us how it was changed from a brittle, burning globe, to a mass of varied matter; nor whether it was simply the cooling process, which separated the delicate ruby from the mountain of granite, and the alabaster rock from the mass of ironstone; but I must not forget that R. Mushet brings some arguments in favour of Buffon's theory, or of one nearly similar:—Firstly, that the earth is an oblong spheriod, and I must confess that it is beyond my comprehension to discover, why the earth should have assumed such a form, unless that it might have been originally a fluid mass, without possessing such a large proportion of caloric as Mr. Mushet assigns. Secondly, R. Mushet concludes that, because the heat increases 10° for every one-fourth of a mile in depth, the increase must continue 300 miles, where the temperature must be 12,000°, which, he says, is quite sufficient to liquify any earthly matters, composing the internal portion of the earth. The latter assertion is unrefutable.

I believe that the supposition of the earth being in a state of fusion originated in the attempt of philosophers to account for the existence of matter, as they attempted to prove that all matter was originally fire. Voltaire did not go so far, as he says—"*Les elements de la nature nous sont inconnus*,"—and, in fact, no theory, promulgated by human brains, has been able to decide the cause, or origin of matter; but if we consider the origin of heat, we will not suppose that fire was connected with its origin, but that it is simply the result of the existence of matter, or, in other words, that heat is the result of violent chemical action on matter. Mr. Mushet supposes that earthquakes are the result of the internal heat moving the crust of the earth. Now, the general belief at the present day is, that they are caused by electricity; and we know that lightning is more frequent in warm countries than in cold, and earthquakes are the general accompaniments of lightning in the West Indies. We hear of earthquakes more frequently in those islands than in Russia or Sweden; so that it seems evident the state of the atmosphere is connected with those terrible convulsions, which have destroyed cities; and surely R. Mushet will not say, that the sun exerts sufficient power on the earth to have kept the crust of earth thinner near the equator—for the fact is, that mines have been worked to a great depth in every part of the globe; so that, to speak of the crust being thick in some places, and thin in others, involves a contradiction, as in that case it would be impossible to descend in great depths in those countries where the crust has burst, and yet it is well known that mines are worked at no great distance from these natural furnaces.

In whatever part of the globe we tread, we see nothing to indicate that the earth ever was in a state of fusion—we should rather find abundant proofs of the reverse; water seems to have acted an important part at the creation, and at subsequent periods. When at Portland, in 1841, I saw several large trees in a state of petrefaction, which had been discovered at a great depth, imbedded in the freestone, of which the island is almost entirely composed. These trees must have been in that position from a very remote period; and if fire had been the agent which compressed the matter into a dense mass, it would have been impossible for the form of the trees to have been retained—while, if the particles of matter were conveyed by means of water, the mystery of their preservation or petrefaction (for nearly all the vegetable matter disappears) ceases; and if a whole island could be formed in this manner, why not the whole world? If R. Mushet will read once more the Mosaic account of the creation—an account as correct as it is poetic—he will there find the first mention of matter is water, *not fire*—"*And the spirit of God moved on the face of the waters*;" and further—"*And God said, Let the waters under the heaven be gathered together into one place, and let dry land appear*." It would here seem that the whole of created matter was originally an homogenous mass, and then separated as different bodies; and surely water and fire could not have been used at the same time to attain the same end. Does R. Mushet suppose that the Creator separated the waters from the burning mass, and then spread them over to cool it. John De la Haye.

Liverpool, 11 *mo.*, 9*th.*

THE GASES OF THE BLAST FURNACE.

Sir,—Your classical correspondent, "Ferreus,"—or, as he might more properly have subscribed himself, "Aheneus,"—scarcely deserves a serious refutation of his remarks. Referring to my former paper on this subject, I find 200 lbs. of iron, not 400 lbs., to be the quantity therein stated; and, therefore, "Ferreus," instead of attacking the correctness of my figures, should first be sufficiently candid to state them, as they really stand, in your Number of the 24th of Oct. There is an essential difference between my statement, of 324 lbs. of carbon to 200 lbs. of iron, and that of "Ferreus,"—viz.: 324 lbs. of carbon to 400 lbs. of iron. The learned gentleman has made a slight mistake—perhaps, from writing after dinner, when persons are sometimes suspected of seeing double.

I have confirmed, not invalidated, the assertion of Messrs. Playfair and Bunsen—viz.: that the effective carbon is to the waste carbon, as 18·46 to 81·54—my own results being 17·91 of effective carbon, to 82·09 of waste carbon: ratios which nearly coincide. It is possible that the amount of blast may be so proportioned, that the whole of its oxygen may be consumed near the tuyeres; but to affirm that the quantity of oxygen poured into a blast furnace at the tuyers cannot be increased, so as to pass off unconsumed, is a preposterous absurdity. To show this clearly, let us assume that Messrs. Playfair are correct in asserting, that the whole of the oxygen is consumed at the tuyers, and converted into carbonic oxide by union with its combining amount of carbon: then, since 25 tons of common air are consumed to produce, on an average, one ton of pig-iron, it follows that 105 cwts. of oxygen, and 395 cwts. of nitrogen, pass in through the tuyeres; and since, by hypothesis, the whole of this oxygen unites with carbon, to form carbonic oxide at the tuyers, it must unite with its proper combining proportion of carbon—viz., 80¼ cwts.—therefore, four tons of carbon are consumed at the tuyeres, for every ton of pig-iron manufactured. How, then, do the Scotch ironmasters continue to make a ton of pig-iron with less than two tons of raw coal,—and, therefore, less than one ton of carbon? It is manifest that only a certain quantity of oxygen can be consumed in any blast furnace in a given space of time; and if the quantity passed in through the tuyers shall, in that space of time, exceed the amount consumed, its excess must pass off somewhere; and if "Ferreus" can point out where it really does pass off, if not at the furnace top, he will greatly enlighten my ignorance on this subject. I never stated that this excess of oxygen underwent no change, in passing through the heated mass of materials: but I see no reason, why heated oxygen should not pass as readily through the *tube* of a blast furnace, as through the tube of a hot-blast pipe. How Messrs. Playfair and Bunsen obtained samples of gas from the centre of fusion in a blast furnace—that is, from the central column of oxygen, which is constantly passing up the vertical axis of a blast furnace—I am at a loss to comprehend; unless, in their own persons, they were enabled to re-enact the chiefest miracle, recorded in the Book of Daniel. They might readily obtain gases from the sides of this column of combustion; for, first, as in a rapid river, there exists a current *upwards*, along the banks, called by boatmen "backwater;" so, in a blast furnace, there exists along the sides a downward current of gases, formed in the upper regions of the furnace, and differing essentially from the strong upward current of oxygen. Cyanogen gas forms a constituent of the descending current, along the sides of the furnace, and cyanide of potassium, is often abundantly formed, and comes down to the tuyeres. In blast furnaces, using three tons of mine to produce one ton of iron—and this is far from being unusual—the earthy matter will be to the metallic matter nearly as 66 to 33; so that there is nothing very *monstrous* in my calculations. At Park-end furnace, one ton of iron has often been produced, with but a *little more* than three-fourths of a ton of carbon.

I am sorry that "Ferreus" is disappointed with my cement; but I am assured by the leading cement makers, that my cement is far superior to any at present known, and I shall briefly explain the causes of this superiority. Iron filings form, by their oxidation, a cement nearly as hard as iron, but of a most disagreeable colour. Protoxide of aluminium forms by oxidation, in contact with zinc and sand, a cement as hard as that obtained from iron filings, but possessing a most agreeable colour, and a degree of plasticity and smoothness, which is altogether deficient in the iron rust cement. In the ordinary cements, prepared from lime, clay, and sand, no previous deoxidation of the aluminous base has been effected—whilst, with my cement, the whole process depends upon the previous deoxidation of the *sesqui*-oxide of aluminium.

On this latter subject, I have employed months of laborious investigation; and I do not feel, that I shall be readily made to doubt the validity of my statements, by a critic who possesses so little accuracy, as to read 400 for 200, and ground his only argument upon so egregious a misstatement.—Robt. Mushet: *Coleford, November* 9.

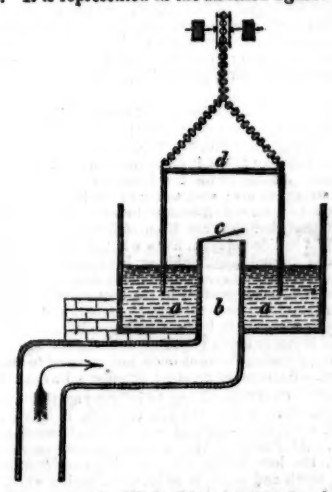
RELATIVE STRENGTH OF MALLEABLE IRON BEAMS.

Sir,—The laws of physics can only be correctly deduced from careful observation and repeated experiment; this is the true method of establishing a theory for the guidance of our future reasoning. *One* well ascertained fact is better than a thousand ingenious hypotheses or hasty generalisations. As far as it goes, at least, it is a safe landmark; and when confirmed by a succession of strictly identical phenomena, it becomes a sure and unerring guide in philosophical investigation. Such appears to be the value of the experiments of Mr. W. Fairbairn and Mr. E. Hodgkinson, noticed in the last *Mining Journal*, on the relative strength of beams of malleable iron. Giving these gentlemen credit for sufficient skill and care in conducting their experiments, they have succeeded in establishing two important facts, which are likely to be of extensive application in mechanics; and appear of such especial value in reference to the round or cylindrical rail of Mr Greenhow, that I must beg of you once more to permit me to take up my pen in the cause of his truly, and hitherto only, philosophical system of constructing railways. "Mr. Fairbairn's experiments (I quote the article referred to) may be said to have only established this general fact—that hollow beams of wrought-iron are about three times stronger than solid beams of the same form. Mr. Hodgkinson's experiments had, for their special object, to ascertain what sort of hollow beam is the best—oblong, or square, or cylindrical." "From the results * * * the *cylindrical* are (as might have been, and was, in fact, anticipated by Mr. Hodgkinson) the *strongest of all*, and the *square* next in degree." The table contained in the article does not furnish two cases strictly parallel, whereby to estimate the relative strength of different forms of tube of equal weight and diameter; but the two instances which approach nearest to these conditions, show that the cylindrical tube of equal weight has, as nearly as possible, double the strength of either the square or oblong. If these results be obtained with tubes of *wrought*-iron, may not like results be reasonably predicated in tubes of *cast*-iron?—and, if such conclusion should be confirmed by experiment, how fully will bear out the supposed adequacy of *cast-iron*, as regards *strength*, for the construction of cylindrical rails. But, whatever may be the result of such experiments, it is at least clearly made out, contrary to the expressed opinions of some persons, that a hollow cylindrical rail of malleable iron, of given weight, is of greater strength than the same quantity of metal arranged in any other form. The H rail may be considered as two halves of a square tube placed with their walls in contact, and is, probably, equal in strength to a square rail of the same diameter; its relative strength, compared with a cylindrical tube, being nearly in the proportion established by the experiments of Mr. Hodgkinson, and giving to the latter a decided advantage.

Will you permit me, Sir, before concluding, to say a word or two on Mr. Mushet's application of the cycloid, as the true solution of the problem of diminished friction on the round rail? Assuming, as undeniable, the fact that the hollow tire of the wheel can touch the rail *at one point only at the same time*, however nearly it may approach it in other situations, it becomes evident that, during the revolution of the wheel, that *single point of contact* must, practically speaking, describe a cycloid; and when, from causes acting on the wheel, the point of contact is removed from the vertex to any other part of the rail, the truth still remains untouched, that a cycloid, or succession of cycloids, must be described, varying in length according to the diameter of that part of the wheel in immediate contact with the rail; and hence the necessary and entire absence of *rubbing* in the *rolling* motion of the wheel over the round rail.—G. M. T.: *Cambridge, Nov.* 2.

MR. STRUVE'S PATENT MINE VENTILATOR.

Sir,—I was induced, by the favourable notice which you bestowed on Mr. Struvé's patent "mine ventilator," to order the descriptive pamphlet, which that gentleman has published upon the subject. Without entering into any discussion upon the merits of this ventilating machine, I simply wish to direct attention to the fact, that it is essentially the same in principle as the hydraulic air pump, invented many years since by Mr. John Taylor, and which is extensively employed in the mines of Cornwall. In the MS. notes of a tour made by a relative of mine, through the mining districts of Cornwall, in the year 1817, I find a drawing and description of one of these machines; and it is also fully described in the 14th volume (published in 1820) of *Brewster's Edinburgh Encyclopedia*. That your readers may be satisfied of the correctness of my representations, and be enabled to form their own conclusions, I shall quote the latter description:—"*Taylor's Hydraulic Air-Pump*.—An exhausting machine, which may be termed a hydraulic air-pump, has been applied to the ventilation of mines of a moderate extent, and where there was no dangerous quantity of inflammable air. It is the invention of Mr. John Taylor, of Tavistock, in the county of Devon, and has been applied with complete success. The construction is very simple, has very little friction, and shows the ingenuity of the inventor. It is represented in the annexed figure:—



a is a large cistern, nearly filled with water, made of wooden staves hooped with iron, circular, and from 6 to 8 feet in depth. Through the bottom of this vessel a pipe, *b*, passes from the mine to be ventilated, and, passing up through the water, is carried about a foot above it. Upon the top of this pipe is an air-tight valve opening upwards; over this pipe, and within the sides of the cistern, a cylinder of plate iron is placed, open at the bottom, but close at the top, in which top an air-tight valve is placed, also opening upwards. This iron cylinder is made to move in a vertical direction by guides or sliders, and its upper end is attached to a lever, or a chain, which is moved, either by a water-wheel or a steam-engine. When the cylinder descends, the valve *c*, at the top of the pipe, shuts, and the air contained in the cylinder opens the valve *d*, in the cylinder top, and escapes; but the instant the cylinder ascends, the valve *d* shuts, and the valve *c* opens, by which means a quantity of air, equal to the contents of the cylinder, above the surface of the water, is drawn from the mine through the pipe *b*. This repeated exhaustion causes a regular circulation of air through the mine, to supply the circulating current produced by the working of the machine. An exhausting machine of this construction, may be made *from the smallest size, to be worked by the hand, to any requisite size to be moved by machinery*."

An inspection of Mr. Struvé's pamphlet, and illustrative sketches, will, I think, satisfactorily prove the perfect identity of his patent ventilator, with that described above. I may mention, also, that the application of the principle of exhaustion to the ventilation of mines, has been frequently attempted in the collieries of Newcastle, which are so heavily charged with carburetted hydrogen. At Heaton Colliery, a powerful air-pump was erected, under the superintendence of the late Mr. Buddle; the piston was 5 feet square, with a stroke of 8 feet, and worked 20 strokes a minute—the valves were one-third the size of the piston. This machine, like many others, was, however, found insufficient, and the furnace was again resorted to, as the only *certain and effectual means* of extracting the noxious gases from the mine.—Senex: *Pontypool, Nov.* 4.

FAUVELLE'S SYSTEM OF BORING.

Sir,—The plan of boring the earth, &c. &c., by means of hollow tools, through which a stream of water is forced to remove the particles out, was patented in this country, by Mr. Robert Beart, of Godmanchester, on 12th July, 1844, or two years before Fauvelle was heard of—for specification, see *Repertory of Patents*, vol. 5, p. 239. He claims—"The so arranging apparatus for boring in the earth and in stone, that the earth or matters cut or moved by the tools employed may be carried away by currents of water, as described."—R. S. N.: *Gateshead, Nov.* 11.

TUBULAR BORING ROD.

Sir,—I have read, in your last week's publication, a letter from your correspondent at Glasgow, "An Admirer of your Journal," in whose view of the importance and value of this new boring rod, I perfectly coincide. To enter into a correspondence with this gentleman, through the medium of a newspaper, is objectionable and inconvenient; but if he will favour me with his address, I hope to offer him such suggestions that may be the means of his attaining the object he expresses himself to be so much interested in.—S. Reid: *Newcastle-upon-Tyne, Nov.* 10.

Mining Correspondence.

ENGLISH MINES.

HARRISTOWN.—The lode in the 24 fm. level end, west of engine-shaft, is at present poor. The lode in the 18 fm. level west is producing 1½ ton per fm.; the lode in the 18 fm. level end east is producing three-quarters of a ton per fm. The lode in the western winze, sinking under the 12 fm. level, is producing 1 ton per fm.; the lode in the 12 fm. level end west is producing over 1 ton per fm.; the adit level end is producing good stones of lead, lode large, principally composed of gossan; nothing new at Clon Mines. The following is a list of our prices for November month:—28 fm. level end, 3*l.* per fm. (6 men); 18 fm. level end west, 4*l.* per fm. (6 men); 18 fm. level end east, tribute, 6*l.* per ton (4 men); 12 fm. level end west, flat-rod shaft, 50*s.* per fm., and 5*l.* per ton for ore (5 men); 24 fm. level end west of engine-shaft, 5*l.* 10*s.* per fm. (6 men); 12 fm. level end east, 4*l.* per fm. (4 men); western winze, sinking under 12 fm. level, 4*l.* per fm. (6 men); winze sinking under 18 fm. level, west of flat-rod shaft, 6*l.* per fm. (6 men); rise on old backs, 2*l.* 10*s.* per fm. (4 men); Maullintown shaft, 2*l.* 5*s.* per fm. (6 men); adit end, 1*l.* 10*s.* per fm. (6 men); cutting lodge footway shaft, 18 fm. level, 4*l.* cost (4 men); Clon Mines, shoal and cost 1*l.* 10*s.* per fm. (4 men); tributers, from 30 to 35 men—prices from 4*l.* to 6*l.* per ton.—T. Angove: Nov. 10.

BEDFORD UNITED.—At Wheal Marquis, the lode in the 80 fm. level east is 2 ft. wide, producing some saving work. In the 70 fm. level east the lode is 2½ ft. wide, saving work; the lode in Crew's winze, in this level, is 2 ft. wide, and worth 10*l.* per fm.; and in Michell's winze the lode is 15 in. wide, worth 8*l.* per fm.; the rise in the level has been holed to the winze in the 58 fm. level in the past week. The pitches, on the whole, are looking favourable. At Wheal Tavistock, Phillips's engine-shaft is 4 fms. 2 ft. under the 47 fm. level. The lode in the 47 fm. level east is 2 ft. wide; and in the end west is 18 in. wide, producing good stones of ore. The lode in the 35 fm. level east is 15 in. wide composed of spar, mundic, and ore. The south engine-shaft is 20 fms. below the surface; the lode is 6 ft. wide, composed of gossan, spar, and stones of ore. The lode in the adit level is 18 in. wide, spar, gossan, and spots of ore.—James Phillips: Nov. 10.

CALLINGTON.—Johnson's engine-shaft being sunk for a 125 fm. level, we have commenced cross-cutting for the same; and shall at once proceed to divide and case the shaft, take out pent-house, and prepare for drawing for the same. In the 112 fm. level, driving north, we are opening tribute ground; Johnson's lode, at this level, driving west, is producing good stones of tin. In the 100 fm. level, driving north, the ground we are opening will set at 10*s.* in the 1*l.*, on the value of the lead; in the south end the lode is not taken down. In the 90 fm. level north no lode taken down; in the south end the lode continues disordered. In the 80 fm. level the lode continues productive. At the north mine, in the 100 fm. level, to the north and south, the ground continues soft; the lode has a promising appearance, intermixed with silver-lead ores. In the 90 fm. level south we are just now at the intersection of the copper lode—the back will set at a low figure. In the 80 fm. level north the lode continues good—worth 15*l.* per fm.; in the south end the lode has not been taken down.—J. S. Phillips: Nov. 9.

CONSOLIDATED TRETOIL.—Henwood's shaft is now down 11 fms. 2 ft. below the 70 fm. level; we have now to case and divide the shaft, &c., which we shall perform as fast as possible, and shall then commence driving and prepare for sinking below; the lode in the shaft is 15 in. wide, producing some good stones of ore—the ground in the shaft is not so hard as it has been. In the 70 fm. level, east of Henwood's shaft, the lode is 18 in. wide, opening ground that will set at a moderate tribute; we are rising in the back of this level for ventilation, and also to open ground for tribute; the lode in the rise is 15 in. wide, a good orey lode; in the winze, sinking on this rise, the lode is 1 ft. wide, at present unproductive. In the 50 fm. level, east of Henwood's shaft, the lode is 15 in. wide, producing some good ore; in the 50 fm. level, east of John's shaft, the lode is 1 ft. wide, producing but a small quantity of ore.—Henry Williams.

CUBERT SILVER LEAD.—There is no alteration in the ground in the engine-shaft since last week's report.—At the 25 fm. level going east, lode divided still into two parts, each being about 6 in. wide, composed of soft spar, lead, and mundic; the western end at this level continues to pass through disordered ground, and the lode unproductive; the middle lode here, going west, is not altered since we began to drive on it. At the 16 fm. level west, the lode is 1 ft. wide, saving work, and a promising level; going east, the lode is 1 ft. wide, chiefly gossan, with rich stones of lead. Respecting the tribute department, this being the first week only since the setting, not much can be said—so far, however, as we are able to form an opinion, we believe their respective tributes are rather low.

EAST CROWNDALE.—We beg to inform you, that the 30 fm. level east is rather improved since the last report; the lode is now 1 ft. wide, composed of flookan, spar, and a branch of mundic, 2 in. wide; and there being some water coming out of the lode, we think it an indication that there will be a change for the better soon. At the 20 fm. level east we have turned off to the south of east, on some strings of ore; and, so far as we have seen, it appears as if the main part of the lode is turned off in that direction, is 18 in. wide, saving work; you will perceive that there has not been sufficient done in this place as yet, for us to give you a decided opinion as to what it may lead to. In driving and stoping the piece of ground, about midway between the 20 and 30 fm. levels, we have a lode 20 in. wide, good saving work; and, from present appearance, likely to hold for some time. The ground, in the bottom of the new engine-shaft, is at present harder than it has been for some time past, and, of course, will be more spare for sinking. Park shaft, below the deep adit level east, is down about 8 ft.—the ground is pretty much the same as at the commencement. We shall commence making dressing-floors at once, and proceed to clean the ore as soon as it is completed.—Samuel Sprague; Stephen Paull: Nov. 7.

EAST TAMAR CONSOLS.—I beg to inform you, that we have commenced sinking Hitchins's shaft below the 54; the lode in the 54 fm. level, north and south, is 2 ft. wide, fluor spar and ore. In the 46 south no lode taken down since last report. At Furzehill, the men are getting on very well in sinking Harrison's shaft, the lode is 2 ft. wide, looking very promising. The lode in the 38 fm. level, north and south, is 20 in. wide, saving work. The lode in the 30 fm. level south is very much improved since last report. I expect to sample, on Wednesday, 40 tons of silver-lead ores.—B. Robins: Nov. 10.

GREAT WHEAL MARTHA.—The new engine-shaft is sunk 25 fms. 2 ft. below the adit level, and the operations are being carried on satisfactorily. At Sherral's bottoms, we have opened on a lode bearing nearly east and west, and underlaying a little southerly; it consists mostly of a whitish clay, containing mundic—giving it the appearance of a tin lode; should the weather continue fine, we propose sinking on it next week, when we will report more fully on its character; there are several lodes running through this ground, and we consider the strata to be very favourable for mineral deposits.—John Prince; Thomas Penaluna: Nov. 7.

GREAT MICHELL CONSOLS.—I beg to inform you, since my last, the shaftmen have been, and still are, engaged cutting bob-plat, and ground for plunger-lift, fixing bearers, cistern, rods, catches, &c.; and we hope to complete the whole by Saturday week. The 20 fm. level east is without important alteration, the lode being composed of gossan, with stones of ore in places. The appearance of the 20 west is improved, the lode is chiefly composed of very fine gossan, mundic, spar, and a small proportion of ore—a very kindly lode.—T. Richards: Nov. 10.

GUNNIS LAKE.—The lode in Bailey's engine-shaft is 3 ft. wide, composed of gossan and spar, with good stones of copper ore in places. The lode in the 12 fm. level west is 2½ ft. wide; and in this level east, 2 ft. wide, composed of gossan, spar, and ore, saving work.—W. Richards: Nov. 10.

HANSON.—In reporting on these mines this week, I beg to say, our sumpmen are cutting a plat at the 22 fm. level, east of engine-shaft, to sink a shaft under said level, on Stainsby's lode, in order to prove that course of ore with all possible speed. The sump whim-shaft is now completed from the 22 to the level 5 fms. below; and those men are now about to commence driving the 32 fm. level east from engine-shaft. We also shall, in a few days, set the 32 fm. level from said shaft, to drive west to sump whim-shaft.—Z. Williams: Nov. 9.

HAWKMOOR.—I beg to inform you, that the lode in the 15 fm. level, east of Hitchins's shaft, is about 20 in. wide, composed of spar, mundic, and spots of ore.—J. Richards: Nov. 10.

HOLMBUSH.—We expect the shaftmen will take about six weeks from the above date, to stope down the ground below the 110 fm. level, which we have set them to perform at 5*l.* per fm. We have not taken down the lode in the 120 fm. level, west of great cross-course, since we cut through it, in consequence of so much stuff being in the level, that accumulated when the shaft was being divided down; the water of the lode appears to be very regular. We have set a winze to sink by six men, below the 110 fm. level, to relieve this end, which wants ventilating. In the 120 fm. level, east of Hitchins's shaft, the lode is 10 in. wide, producing stones of ore; in the 120 fm. level, west of the winze, the lode is 12 in. wide, and worth 6*l.* per fm; and, by the dialling, is between 3, and 4 to the north of that which we are driving east on, and is underlaying south, where, as the other part is underlaying north, should the underlie of the two parts continue as they are at present, they will form a junction at the 130 fm. level, which we shall look forward to with deep interest; the lode in the rise, above the 110 fm. level, is 15 in. wide, producing stones of ore; in the same level, driving south, we have stones of lead in the flookan part of the lode, and we have, after 8 fms. further to drive south, to intersect the copper lode, agreeable to the heave in the lode above the stopes below the 110 fm. level; we have set on tribute, in the same level, driving south—the lode is 3 ft. wide, composed of flookan, spar, and stones of lead; the lead pitches, in the back of the level, are again set at 7*s.* in the 1*l.*, on the value of the lead. We shipped our lead ore at Plymouth, on the 6th inst., on board the *Deres* brig.—W. Lean.

KIRKCUDBRIGHTSHIRE.—I regret to state, I have been afflicted with a severe cold these two or three days past, for this reason, I am not able to send off the cost-sheet this post. The lode in Stewart's shaft is producing a fair quantity of lead; the stopes in the sole of the 20 fm. level looks well; we are also raising some lead in roof of this level, but not so much as in the sole; the 20 end, and the adit end, look much the same as last reported—little. The vessel intended to take the lead and copper ore has not yet arrived.—J. Buzzo: Nov. 7.—The vessel referred to in my last having arrived at our port, Palmire Bridge, I have to day agreed with the woodman, and the ship's agent, to take our copper ore to Liverpool, and lead to the Dee, at 7*s.* per ton, the usual price per ton for a full cargo. The woodman will not be ready till this day week with his wood, so the vessel has agreed to wait till that time. If he could raise enough to fill the vessel, the freight would have been less to us, which he has engaged to do in six weeks time for another cargo. The lode has been improved in the backs since Saturday's post, and a shade better in the bottom stopes. The adit level east is also mending; but the water is greatly increasing on us at Stewart's.—J. Buzzo: Nov. 9.

MENDIP HILLS.—I beg to inform you, that we have holed the cross-cut west of new shaft to the 20 fm. level, north of Somers's shaft; when I immediately removed these men to stope the bottom of the said level, where we have a very large lode, 3 ft. of which, on the footwall side, is producing stones of lead, from 10 to 20 lbs. in a stone—on the whole good saving work. At Stainsby's we have both walls of the lode in the shaft going down very regular, about 6 ft. apart, down 4 fms. below the 38 fm. level. I have discontinued the 25 fm. level, north of Barwell's shaft, for the present.—F. C. Harpur: Nov. 9.

PENTUAN WHEAL MARY.—We have driven into the hill 7 fms., and am glad to inform you that the ground is still improving; yesterday we cut a very fine branch, from 3 to 4 in. wide, spotted with copper ore, running parallel with the main lode, underlaying north.—J. Chynoweth.

SILVER VALLEY.—I beg to inform you, that we commenced sinking the engine-shaft, below the 40 fm. level, on Thursday last—the ground is favourable; the lode in this level east is 3 ft. wide, containing a large proportion of zinc and mundic, with occasional spots of tin—it is running nearly parallel with the slide, or south underlaying vein, in consequence of which we have not yet seen the junction above the bottom of the level. There is now another branch, or part of the tin lode, further south, which, judging from the bearing of the same at the 30 fm. level, will fall into the lode about 8 fms. east of this place; the western end of this level is at present suspended, by reason of their not being sufficient air for two pairs besides the shaftmen, until a communication is effected with the winze, sinking upon this level, east of the cross-cut, from the 30, which we expect will be by the end of next week; the lode in the 30 end west has a little improved in the past week—it is now 2½ ft. wide, and producing a little tinstuff; here we expect to be getting near the western shoot of tinny ground, gone down in the bottom of the 20 fm. level. We have taken the men from the 20 end west to stope until better ventilation is effected, by taking away the tin ground in stoping the backs. At the silver mine, the western shaft is holed to the 10 fm. level, and we shall now resume driving the western end; the silver lode here is in two parts, which are approaching each other going west—the north part is small, composed chiefly of flookan; but the south part, which is 15 in. wide, varies a leader of carbonate of iron, with spots of lead, rich for silver; the lode in this level east is split into three parts, and disordered. Operations at Oak shaft are suspended for the present, by reason of the water having considerably increased with the late rains. There is a highly promising piece of unexplored ground; but it can be prosecuted with less expense in a dryer season of the year than at present. At Wheal Sisters, the lode in the shallow adit east is 1 ft. 6 in. wide—a great part of which is mundic, containing a little silver, and the lode altogether presents very favourable indications.—S. Richards: Nov. 9.

TAMAR SILVER LEAD.—In the 160 fm. level, the lode is 6 in. wide, composed of capel, interposed with ore. In the 145 fm. level, the lode is small and unproductive. In the 135 fm. level, the lode is again making its appearance; after passing through about 6 fms. of slidy ground, it is now about 1 ft. wide, composed of capel and ore, saving work. In the 125 fm. level, the lode is 3 ft. wide, orey throughout, and of a promising character. In the 115 fm. level, the lode is 20 in. wide, work of a coarse quality. In the 105 fm. level, the lode is 15 in. wide, with occasional stones of ore. In the 145 fm. level, north of the shaft, the lode is 9 in. wide, composed of capel and ore. The inclined plane shaft is sunk 16 fms. below the 113 fm. level. We sampled on Thursday, 5th inst., computed 110 tons of rich silver-lead ore. At the North Mine, the engine-shaft is sunk 8 fms. 3 ft. below the 60 fm. level; the lode in the shaft is 18 in. wide, composed of capel and mundic, with spots of ore. In the 60 fm. level, north of the shaft the lode is 3 ft. wide, saving work, interspersed with ore throughout; we have 10 pares of tributers at work in the different levels of this mine, and we consider the whole of them are making fair wages. At Wheal Hancock the ground is harder for driving—it is a very different strata to what it was in cross-cutting west. At Hole's Hole, we are driving west with all possible speed—we are about 7 fms. 3 ft. from the shaft; we have gone through some small droppers of rich silver-lead ores, which will fall into the lode in depth; and, judging from the present appearance of the channel of ground we are now in, there is a promising speculation before us.—J. Sprague: Nov. 9.

TINCROFT.—The ground has been hard in the 100 fm. level cross-cut, south from new engine-shaft, so that we have not yet cut the lode at that level, but are daily expecting to do so. The lode in the 90 fm. level end east is 3 ft wide, orey, but not rich; we have not yet cut the lode beyond the cross-course in the 90 west. The lode in the winze, sinking below the 90, is 3 ft. wide, producing some good ore. The lode in the 80 east is 2½ ft. wide, producing coarse quality ore; the lode in the west end, same level, is 3 ft. wide, producing some good quality ore, and kindly. The lode in the 70 east is 3 ft. wide, producing fair quality tinstuff; the west end, same level, is producing some ore. All our levels and winzes are laying open ground, that will work at moderate tributes, though not so good as when last reported on; but our pitches, on the whole, are working, as you will observe, by the setting report sent you by this post. Palmer's shaft is now 9 fms. 1 ft. 3 in. below the 70 fm. level; we have now some copper ore in the bottom of the shaft on south lode; we hope soon to get ore on the north lode. The 70 fm. west is producing some ore, and kindly; we expect soon to get into the more productive ground gone down in the level above. In the south mine, the lode in the 152 west is 2 ft. wide, worth 15*l.* per fm.; we have set the stopes in the bottom of the 152 fm. level east, at 10*s.* in the 1*l.* The lode in the 142 east is 4 ft. wide, worth 20*l.* per fm. The lode in the winze, sinking in the bottom of the 120, is worth 15*l.* per fm. The lode in the 120 east is 3 ft. wide, worth 10*l.* per fm. The lode in the 110 is worth 8*l.* per fm. The winze in the bottom of the 100 is worth 15*l.* per fm. The new shaft, for East Pool lode, in the western part of the mine, is now 31 fms. from surface. We shall soon commence driving to cut the lode at the level of the deep adit in East Wheal Crofty. At the Wheal Providence part of the mine we have drained the water to the adit level, and are cleansing the adit as fast as possible.—W. Paul: Nov. 9.

TRELEIGH CONSOLS.—In Christoe's shaft, below the 100 fm. level, we shall commence sinking in a day or two; the men have been putting in pent-house, &c. In the end of the 100, east of Christoe's, nothing particular has taken place—lode 2 ft. wide, with stones of ore; in the 100 fm. level, west of Christoe's, branches about 8 in. wide, without ore. In Garden's shaft, below the 90, nothing sunk, preparing the plunger lift, which is about to be fixed at the 90 fm. level. In the 90, west of Christoe's, lode 3 ft. wide, rather better, worth 25*l.* per fm. In the 80, west of Christoe's, lode 18 in. wide, with a small quantity of ore, ground more favourable. In the winze, below the 70 fm. level, lode 20 in. wide, producing stones of ore; in the 70 fm. level, west of Good Fortune, lode 3½ ft. wide, worth 8*l.* per fm. In the 60 fm. level, west of Symons's, lode 20 in. wide, much as last week, worth 5*l.* per fm. In the 50 fm. level west, on the north lode, lode 18 in. wide, with very little alteration, worth about 4*l.* per fm. In the 44 fm. level, west of Symons's, lode 18 in. wide, more promising, with good stones of ore. The adit cross-cut is driving south to the west shaft. We expect to sample on Monday next about 200 tons.—W. Symons.

UNITED HILLS.—In the 90 fm. level, in driving through the south lode it still continues unproductive; in the western end the lode is 3½ ft. wide, 2½ ft. ore of good quality; the lode in the stopes is 2½ ft. wide, 20 in. ore of fair quality. In the 80 fm. level, eastern end, the lode is 3 ft. wide, producing but a small quantity of ore; no alteration for the past week in driving north. In the 70 fm. level, eastern end, the lode is 3 ft. wide, 18 in. on the north part ore of fair quality; in driving north the ground has been more favourable for the past week. In the eastern shaft the lode is 3 ft. wide, 2 ft. ore of fair quality. In the 60 fm. level the lode is 4 ft. wide, 2½ ft. ore of average quality. In the cross-cut of the 50 fm. level the ground continues hard for driving. In the shallow adit the lode is 3½ ft. wide, producing ore throughout, of low quality. At Wheal Charles, in the 50 fm. level, the lode is 2½ ft. wide, coarse in quality. In the 40 fm. level the lode is 3½ ft. wide, 18 in. ore of good quality. At Wheal Sparrow, in the 40 fm. level, nothing done west of Tonkin's winze for the past week; the men have been engaged cleaning stuff, and sundry other work. In the 30 fm. level the lode is 2 ft. wide, producing good stones of ore.—Thomas Trevenen: Robert Williams: Nov. 10.

WHEAL ADAMS.—Yesterday, being our settling day at the above mine, I beg to send you a report of the same:—In driving south-east, at the 50 fm. level, we have intersected several branches of lead, spar, and mundic combined, all of which is dipping east towards the main part of the lode, which we expect shortly to intersect—this end is set to drive by 2 men, at 2*l.* per fm.; about 7 fms. further west, at the same level, we have opened some ground on a lode which we are inclined to think, from the nature, underlie, and direction, to be the western silver-lead lode; it is 3 ft. wide, composed of spar, mundic, and fine grain lead, scattered throughout—on the whole, a very promising lode, and on which we have set a rise at 2*l.* per fm., by 2 men, in order to prove it. as well as to unwater and ventilate the 40 fm. level, and to lay open ground, which will sett at a moderate tribute. The lode in the 40 fm. level south of cross-cut, is 4 ft. wide, and worth 8*l.* per fm., and is for the present suspended for a short time only, until the 50 fm. level is driven under it to unwater it, otherwise we shall be obliged to give an extra sum of money to drive and timber it when in a wet state; the lode in the 40 fm. level north is 4 ft. wide, and worth 10*l.* per fm., and is set to drive by 4 men at 2*l.* per fm. Since the communication has been made between this level and the 28 fm. level we have set the south end of the winze to stope, by 4 men, at 10*s.* per fm., and 2*s.* 6*d.* in the 1*l.*; the lode in each end of the winze, and rise (on each part), will produce half a ton of lead per fm. on an average. At the 28 fm. level we have 2 lodes, about 3 fms. apart—one underlaying east about 3 ft. in a fm., and the other not far from being perpendicular; and at the back of the 40 fm. level, they have formed a junction—the rise having been commenced on that part with a less underlie, and the winze on the other part; judging from present appearances, these two lodes will produce a great quantity of lead. In addition to the lead that these tutwork places will produce, we have 6 tribute pitches, that are wrought on at 12*s.* in the 1*l.* We calculate on raising this month 25 tons of lead; and, by Tuesday next, we shall have about 30 tons at the sellers, to sample for last month, samples of which will be sent to all the lead-purchasing companies; on that day Captain Mayle will send you a list of our settling for November.—William Lean.

WEST WHEAL JEWEL.—The 115 fm. level, east on Wheal Jewel, lode 1 ft. wide, producing a little ore. In the 100 fm. level, east on same, lode 18 inches wide, worth 3*l.* per fm. In the 85 west, on the same, lode 1 ft. wide, unproductive. In the 12 fm. level, west of Quarry-shaft, on Tolcarne tin lode, lode 1 ft. wide, worth 14*l.* per fm.; in the winze, in the bottom of the 12 fm. level, east of Quarry shaft, on same lode, lode worth 16*l.* per fm. In the winze, in the bottom of the deep adit, west of old sump shaft, on same lode, lode worth 3*l.* per fm.; we have about 6 ft. to sink to hole this winze before we can measure the same.—R. Johns: Nov. 9.

WHEAL AGNES.—I beg to state to you the prospects of this mine. We have commenced sinking a shaft on the adit level for ventilation for air, which, when it is completed, will have its desired effect, of driving the levels, and working the backs. The tributers are breaking very good work.—B. Robins.

WHEAL BARBARA.—Since my last report of Wheal Barbara, we have extended the adit level east about 6 ft.; I am pleased in being able to announce a great improvement at this point; the lode is 2 ft. wide, and is entirely free of the killas, which has disordered it for some fathoms; from present appearances and composition of the lode, white soft spar mixed with flookan, mundic, and larger portions of lead than it has hitherto yielded, I am of opinion that we are not far distant from a point either a head or below, which will prove very productive of ore. After ascertaining the size, composition, and bearing of the gossan lode, to the west of the shaft, which we have done by 6 ft. driving, we deemed farther driving at this point unnecessary, and commenced a cross-cut, in which we have driven 6 ft. south towards this lode, from a point in the adit about 10 fms. west, and expect to intersect it in a week or 10 days; the lode, in the driving from the shaft before noticed, is about 5 ft. thick, with a leader about 18 in., composed of gossan, strong spar, copper, lead, and jack, and altogether presents appearances far beyond my highest expectations, so little below surface.—W. H. F. Stephens: Nov. 7.

WHEAL CONCORD.—The lode in the 38 west is 1 ft. wide, producing spots of lead, and the ground is harder than usual. In the 28 west the lode is 2 ft. wide, presenting a very kindly appearance; we have done but little here since my last, having removed the men to examine the old workings in the back of the level, and a little east from the engine-shaft we have discovered a lode 1 ft. wide, from which we shall return some lead. We have also commenced a rise, about 28 fms. west from the shaft, very near the former excavations, to prove whether there was any ore left by the former company; the lode is 4½ ft. wide, congenial for lead, and I anticipate, in prosecuting this work, it will turn to good account; the rise above the 28 east is nearly holed to the 20, and, when it has been accomplished, there will be perfect ventilation in the 20, which will enable us to prosecute our researches in the back of that level. The 20 south will, in a fathom or two, approach the point where we expect to cut the lode. The stopes in the back of the 10 are still looking well, but not so rich as when we commenced from the level; in the winze, sinking below this level, the lode is 3 ft. wide, containing good portions of lead. In the 10 fm. level east the lode is 2 ft. wide, chiefly deep blue flookan, it has lately produced good stones of lead and carbonate of iron. Our pile of dressed lead is now computed 18 tons. We are getting on with the crusher as fast as circumstances will allow, but our progress has been retarded, in having to wait for timber, and in consequence of wet weather; the timber, however, has now arrived at New Quay, and the first load will be brought here to-day. I deem it only right to observe, that in the last monthly cost-sheets there has been entered bills for supplies furnished to the mine before I acted as agent, and thus they would appear to be considerably above the real charges on the mine for the respective periods.—J. B. Clymo: Nov. 7.

WHEAL LOUISA.—The engine-shaft is down 18 fms. 2 ft.; the ground through which we are sinking is much the same as last reported; the ground through which we are driving in the south part of the mine is still looking well. Since my last we have cut several branches, which appearances is very encouraging; yesterday we cut a large stream of water in the end, from which it appears that there must be a large lode a little before us.—J. Chynoweth.

WHEAL TRELAWNEY.—The lode in the 42 fm. level, south of the shaft, is 5 ft. wide, and worth 28*l.* per fm.; in the same level, north, it is 4 ft. wide, and worth 20*l.* per fm. The lode in the 32 fm. level south is 2½ ft. wide, and worth 15*l.* per fm.; in the same level north the lode is split in branches, and at present unproductive. The lode in the 22 fm. level north is 3 ft. wide, and worth 12*l.* per fm.—we have just commenced sinking another winze under this level, where the lode is 3 ft. wide, and worth 12*l.* per fm. The lode in the 12 fm. level north is 4 ft. wide, and worth 14*l.* per fm. Trelawney's, or the new engine-shaft, is 26 fms. below the surface, in beautiful soft blue killas, which is very congenial for lead. Our engineers are having in the engine with all possible speed.—P. Clymo, Jun.

[FROM CORRESPONDENTS.]

Birch Tor (Tin Mine).—A considerable and progressive improvement has been made in the 50 fm. level, with every appearance of holding down. The proprietors may now consider all doubts and difficulties being surmounted, as the returns will now nearly meet the costs. The quantity and amount of tin sold this week appears to be 7 tons at 54*l.* per ton, and 2½ tons at 44*l.*, making a total of 477*l.* The saving effected by the use of Brenton's frames surpasses former calculations; they have now 8 frames in operation, which will enable them to return, from the old leavings or halvans, about 3 tons per month, worth 54*l.* per ton—and these halvans are sufficient to return, at a clear profit of 15*s.* in the 1*l.*, more than 10,000*l.*; so that, if they were to suspend all underground operations, and return the halvans alone, they will make a handsome profit for their outlay. Their only difficulty appears to have been the means of separating the iron from the tin—this now they have accomplished.

Creeg Brawse.—Two new pitches were set last Saturday on the Todpool lode at 8*s.* in the 1*l.*, 4 men; and another on the bottom of the 66 fm. level, to 6 men, at 4*s.* in the 1*l.*

Harrowbarrow Old Mine.—We are given to understand, that a change in the local management has been effected within the past few days—Capt Kneebone, the underground agent, having giving place to Capt. B. Cooke, who previously held the office of superintending agent; Capt. Edwards, we believe, now holds that office, and we believe the alteration thus made is considered satisfactory by the body of adventurers. The stamps are about being set actively at work: and report says that tin to the amount of 1000*l.* will be returned within a month or six weeks from the present time.

Lewis Mines.—Within the last fortnight, a considerable improvement has been made here in the 50 fm. level—the lode being full 6 ft. wide, and estimated worth 70*l.* per fm.; the engine-shaft is down to the 60, and a cross-cut being driven to cut the lode at that level, where it is anticipated the lode will be found equally good; 2000*l.* of tin is on the surface, and every exertion in progress for completing the steam stamps. This discovery has created a great demand for the shares, which had gone down to a very low price.

South Friendship Wheal Ann.—In bringing up their lobby to the wheel-pit, they have cut through the lode, which presents at that point one of the most promising lodes seen in the locality; solid stones of copper ore, weighing from 15 lbs. to 20 lbs. weight, have been taken out during the past week, and estimated worth 15*l.* per ton, as broken.

A correspondent writes:—"We understand that, in Lower Town, Gwennap, the wife of one of our Cornish miners, who has of late become highly scientific, having stated to his spouse that it was proposed to introduce cotton instead of gunpowder in the mines, as such was found to be explosive, when exposed or submitted to the effects of nitre (night air), she very sagely recommended him to wear woollen night caps for the future."

MINE ACCIDENTS.

East Wheal Crofty.—R. Dunkin was killed by the falling of earth.

East Wheal Seton.—As J. Piper was riding up in the whim kibble, he missed his hold, and fell down the shaft about 15 or 20 fms.: one of his arms was broken, and he received such other injuries as leaves little hope of his recovery.

North Roskear.—E. Martin, engineman, lost his life by falling down the bob-pit, while taking or putting in ballast.

Mount Charles Iron Mine, St. Austell.—R. Barron was killed by a blast.

Royal Colliery, Eccleston.—J. Battersby was killed by an explosion of fire damp.

Ravenhead Colliery, Eccleston, near St. Helen's.—H. Johnson and S. Westhead was killed by an explosion of fire damp.

Darlaston.—R. Billington was killed by a fall of coal in Mr. Scott's colliery.

Bilston.—R. Rudge was killed by a fall of earth in Barber's Field.

Mossley-road, Ashton.—W. and F. Charlesworth lost their lives while working in the shaft of one of the deep pits of Messrs. Kenworthy's Colliery.

Swinby Colliery, Wigan.—P. Bannack was killed by a fall of roof in the colliery of Mr. Joseph Rylands.

IMPERIAL BRAZILIAN MINING ASSOCIATION.

The half-yearly general meeting of shareholders was held, pursuant to advertisement, at the London Tavern, on Friday, the 13th inst.

JOSHUA WALKER, Esq., in the chair.

The advertisement convening the meeting having been read, the CHAIRMAN briefly noticed the main features to be presented to the meeting, which, indeed, were embodied in the report, expressing his regret that the tidings were not of a more cheering nature, although he contemplated at their next meeting that they would be in a far better position as regarded the contemplated property, but which not having been secured, he deemed it prudent not to remark upon too fully. The shareholders had hitherto manifested their confidence, and he trusted that the directors were deserving of such being reposed, while he could assure the proprietary that they (the directors) were most earnest in their endeavours, and anxious to promote and advance the interests of the company.

Mr. G. THOMAS proceeded to read the report, as follows:—

REPORT.

The directors had hoped to have been in a position to state to this half-yearly meeting of shareholders the completion of a negotiation alluded to in their last report, for the acquisition of another mining property in Brazil. This negotiation was in favourable progress at the time of the last advices from the chief commissioner; and, though no impediment then appeared to an early termination to the treaty, the directors would have been better pleased if they could have announced that the arrangement had been finally concluded. The directors, however, hope it will be their duty, very shortly, to call the shareholders again together, to report that the property in question is in the possession of the company; and that a part of the force from Gongo Soco is employed on this new mine, which holds out the prospect of a speedy return, and of making amends for the long delayed hopes, which the proprietors have had to bear. The directors have every reason to be satisfied with Mr. Henwood, their chief commissioner, who has had the management of this affair, whose judicious caution and prudence have, perhaps, to some extent, prevented the earlier completion of the bargain. Should, however, any unnecessary delay in the completion of the title be now offered by the present owners, the chief commissioner is directed to abandon the negotiation, and to direct his immediate attention to another project, for the employment of a part of the company's force, which, the directors firmly believe, promises, if carried out, to be at least equally profitable. Under these circumstances, the directors hope the shareholders will still continue to them their confidence, and leave these negotiations in their hands, without a more explicit declaration on the present occasion. Since the last meeting, appearances at the mine of Gongo Soco, at one time, led to the expectation, that the produce of gold would have been sufficient to cover the expenditure of the half year, a discovery having been made in the shallow levels in the western part of the mine: a regular course of working was commenced on this spot, but the hopes entertained of successful results have failed for the present; and although the half year closed with an increase of gold, as compared with the former six months, there yet remains a balance of loss on the account.

Two circumstances may be alluded to, as having materially produced this result: the first is the large force necessarily employed at Catta Preta, to try that mine expeditiously, and, therefore, economically; and notwithstanding success has not attended the operations, the directors cannot regret having made an investigation of a property, of which so many very favourable reports had been in circulation. The second cause of the excess of expenditure has been occasioned by the anxious desire of the directors to avail themselves of all the best advice and judgment within their reach, in the selection of the properties most desirable for the company to acquire. At Gongo Soco, the workings below the deep adit have been abandoned, and the machinery withdrawn—a diligent and extensive examination of the lode, which at one moment was promising, having, in the further progress of exploration, ceased to offer any indications which would have justified the continuance of the bottom levels, necessarily very costly to keep dry, and to prosecute. The attention of the chief commissioner, and the captains, is now directed to the western part of the mine, and the shallower workings, where, from time to time, the lode is intersected by veins of gold, which yield good produce for the stamps, and occasionally a little for the washing house. The directors are fully aware that the establishment is too large and expensive, when compared with the produce of the mine; and they would have reduced it ere this, but for the favourable prospects of employment of the excess, elsewhere already alluded to.

The estate at Catta Preta has, to some extent, been examined, at a cost of about 7000*l.* from the commencement (in July, 1843) to the 30th of last June—a sum of money very disproportionate to the gold obtained, which has only amounted to about 1000*l.* There are distinct indications of gold in various parts of this estate, which another, and more extensive, investigation may hereafter develope satisfactorily and profitably; but the funds and general circumstances of the association at this time do not, in the opinion of the directors, justify a further present outlay. The force is, therefore, about to be immediately withdrawn; and, should a liberal offer to purchase this property be made by any party, it may be desirable for the company to accept it. A review of the proceedings of the past half-year, and a prospective view of the present, are very clearly detailed in the recapitulation of the chief commissioner, dated 18th July, which will be appended to this report, and will, doubtless, be read with interest and pleasure by the shareholders.

The quantity of gold for the last six months, ending 30th June, 1846, has been 183 lbs. 7 ozs. 15 dwts. (including 4 lbs. 9 ozs. from Catta Preta)—showing an increase of 38 lbs. 6 ozs. 18 dwts. over the last half-year; and an increase of 88 lbs. 0 oz. 15 dwts. of gold, over the six months, ending 30th of June, 1845. This half-year's produce realised 6696*l.* 5s. 6d., to which, adding the palladium, platina t, and specimens sold, and the balance of interest on the Rio deposit stock, as shown by he auditors' statement, make the total six months' receipts, 7317*l.* 16s. 3d. The expenditure has been for the same period, 10,377*l.* 4s. 9d. (exclusive of that at Catta Preta)—leaving a deficit on the half-year, of 3059*l.* 8s. 6d. The six months, outlay at Catta Preta has been 1369*l.* 6s. 4d. Towards these deficiencies, rs. 85,000 of the 6 per cent. Brazil stock, has been sold under the orders of the board, which produced 7039*l.* 3s. 4d., leaving rs. 88,400 still remaining invested on 30th June, in addition to 31,172*l.* 12s. 2d., 3½ per cents. (reserve fund) in the trustees' names in this country. The directors cannot refrain from an allusion to the negroes. Every shareholder, who reads the reports of the chief commissioner, from time to time, on this subject, will be gratified to see the increasing interest and care devoted to them, and the success which attends the method adopted for their improvement and comfort. Indeed, as stated in the last report, it was a duty which the board felt was imposed upon the association, of acting fairly and kindly to these people, by retaining them in their service, which much influenced the directors to incur the responsibility and anxiety of looking out for another source of employment for them, and of profitable investment of capital for the company. The establishment in Brazil, at the close of June, consisted of 621 persons, orderly, contented, and healthy. It now only remains for the directors to reiterate their hope and expectation, that bright days will shortly again shine on their exertions, and reward the patience of the proprietors.

General Statement of Accounts.

Dr.—				Cr.—			
Balance, 31st Dec., 1845	£8081	6	6	Dividend on 30,509*l.* 14s. 8d., 3½ per cent. stock	£481	6	5
Stock purchased	643	16	5	Ditto on funds in Brazilian stock	553	11	0
General expenses	4741	16	1	Proceeds of sale of Brazilian stock	7039	3	4
Salaries and wages in Brazil £5010 8 8				Gold dust, &c.	6916	15	3
in England 625 0 0	5634	8	8	Balance	5502	5	0
Catta Pretta Mine	1369	6	4				
Specimens purchased	31	7	0				
Total	£20,503	1	0	Total	£20,503	1	0

From the accounts presented, of which an abstract is given, it appears that a balance of 5502*l.* 5s. is carried forward against the company—while the arrears of salaries and wages due by the association, and the amount reserved for passages home, amounts to 4305*l.* 14s. 8d., or 9807*l.* 19s. 8d. in all; while, on the credit side, we have as assets, the mines and estates possessed by the company, stores, materials, stock, &c.—in addition to which is reserve fund, invested in the names of trustees, in the 3½ per cent. stock, 31,172*l.* 12s. 2d.; and loans and investments in Brazil, 14,541*l.* 17s. 6d.—or, together, 45,714*l.* 9s. 8d.—showing an excess of assets over liabilities of 35,906*l.* 10s.

The report having been read, the CHAIRMAN again briefly addressed the meeting, expressing the willingness of himself, and his co-directors, to afford any information which might be required by any shareholder; but evident satisfaction pervading the minds of those present, a vote of thanks was unanimously passed to the chairman, when the meeting adjourned.

DEVON AND COURTNEY CONSOLS MINING COMPANY.

A meeting of shareholders was held at the mine, on Friday, the 6th inst.—WILLIAM ATKINSON, Esq., in the chair.—The report of the committee, and the captains, having been read, it was resolved unanimously, that they be received and adopted, and the accounts as audited be allowed and passed; and that a call of 1*l.* per share be now made, and to be paid to the purser immediately. It was also determined by the meeting, that the present whim shaft on the north lode be continued sinking; and that the water be drawn from the shaft by the assistance of the engine, which Mr. West, the engineer, said was of sufficient power for both shafts; and that a monthly report be sent by the captain through the purser to the *Mining Journal*. The engine, which was set to work this day, performed its duty well. The statement of accounts, showed balance of last account (in July), 856*l.* 14s. 5½d.; call made in July of 1*l.* per share, 1014*l.*—1870*l.* 14s. 5½d.—By June cost as per vouchers, 1611*l.* 2s. 3d.; July, 146*l.* 2s.; Aug. (including 800*l.* paid on account of engine), 1009*l.* 2s. 2½d.; Sept., 292*l.* 2s. 7d.—leaving balance in favour of the company, when all calls are paid to this date, 261*l.* 5s. 5d.

COMMITTEE'S REPORT.

Your committee are happy to inform the shareholders, that all the works of the mine are progressing favourably; but leave to the captain the particular details. They are also happy to state, that the prospects of the speculation are most encouraging, and deserves the most vigorous prosecution. A call is necessary, and hope the shareholders will readily and immediately respond to it, in order that every material may be bought to the greatest advantage; they are proud to say, this is generally the case, with a few individual exceptions, and they have reason to believe those cases arise more from inadvertency or inattention, than from any other cause. In addition to the sett from the Earl of Devon, W. Courtney, Esq., and Col. Harris, an arrangement for Higher Torr, the land of the Rev. Mr. Bray, has been brought to a satisfactory conclusion, which will make it a compact and extensive sett.

CAPTAIN'S REPORT.

Since my last report, of the 2d of July, I beg to inform you that our engine-shaft has been sunk 10 fms., and raised to the collar 4 ft.—making the total depth from brace 20 fms. 3 ft. In July we cut a branch, about 10 in. wide, composed of spar, with spots of ore and mundic; it is underlaying north about 3 ft. per fm., and I calculate it will intersect the lode at a depth of 26 to 27 fms.; we have also cut, at the depth of 18 fms., a cross-course, varying in size from 8 to 14 in. wide, composed of flookan and spar, with spots of copper ore, mundic, and lead, underlaying east about 2 ft. per fm., under which we have a beautiful clean killas; these, I consider, to be good indications, for, where such intersect the lode, they are almost certain of making a good bunch of ore—and it is my decided opinion it will. The water has been gradually increasing; and, on the 15th ult., in consequence of the heavy rains, we found it impossible to sink any further with the whim, since which we have fixed a 9-inch plunger, at 18 fms. deep, and also put down a 9-inch sinking lift; and, as we are now prepared (having sufficient pumps on the mine) to sink 10 fms. more, I would not recommend to drive to cut the lode; before we are at that depth, which I think can be done by the end of January, some time in March we shall cut the lode. The lode in the deep adit has varied in size from 15 in. to 2 ft. wide, sometimes producing good stones of ore, and at other very poor; it is at present 18 in. wide, composed of mundic, spar, and killas; the end is now 82 fms. distant from the Derrick shaft. In July we cut a very promising lode at surface in shoding, about 80 fms. north of the gossan pit, on which lode we have sunk a shaft 12 fms. deep—the lode varying in size from 4 to 6 ft. in width, producing several tons of ore, with a great deal of lead and cann, which indicates that there is a cross-course somewhere near the shaft. The ground is favourable; but, from the increase of water, we were obliged to suspend the sinking for the time; from the very favourable appearance of this lode, there has been a shallow adit commenced on the lode, which will come under the shaft, about 26 fms. deep; the lode in this adit is 2 ft. wide, composed of spar, mundic, with spots of ore in places; the ground is favourable for driving, and, I hope, we shall not have to drive more than 20 or 30 fms. further before we shall come into grey ground, which, to complete, must take from three to four months; we have opened on the lode in several places at surface, to the extent of 150 to 200 fms. in length, and the appearance, in every pit, indicates that it will be a profitable concern.

J. JOB.

UNITED HILLS MINING COMPANY.

A special general meeting of the shareholders was held at the offices of the company, Adam's-court, on Thursday, the 12th inst., pursuant to circular.

ROBERT CLARKE, Esq., in the chair.

The advertisement convening the meeting having been read, the CHAIRMAN, in addressing the meeting, adverted to the report presented by the directors to the shareholders in June last—on which occasion, while they expressed their hope that the returns from the mine would render unnecessary any appeal to them for additional funds, yet it was with regret that they now felt themselves called upon to convene a meeting of the shareholders, and to submit to them a state of the affairs of the company, whereby it would be at once seen that some measures must be taken to meet their engagements: he did not despair of the mine—this point, however, they would have an opportunity of learning from the report of the agents, and more especially from the *viva voce* evidence, which would be readily afforded by Capt. W. Richards, who was then present. The expectations entertained by the directors, at the last meeting of adventurers, had not been realised from two causes—the one, which must be generally known to those present, and to which such must be mainly attributable, was the low standard; while he regretted to add, that the quality of the ore raised, had been much depreciated. The debts of the mine, which might be taken at about 4000*l.*, has been gradually accumulating—the monthly loss being from 150*l.* to 200*l.* The mine however, he was happy to say, held out prospective advantages, and which (he hoped) would yet realise to the shareholders satisfactory results; at the present bottoms, the 90 fm. level, it was true that the lode was hard—at the same time, that the several levels in depth held out encouragement from their increased productiveness. To refer, however, to the financial affairs of the company, he had only to repeat that certain debts and obligations had been contracted, and such must needs be met by a contribution on the part of the shareholders, in such manner as they might deem fit; while a proposition would be submitted to them, which they might approve, or substitute any other resolution in its stead.—The report from the agents was then read:—

AGENTS' REPORT.

Nov. 3.—In compliance with your directions, we beg to lay before you the following report of the present state and prospects of the mine. We advert first to the workings east of the engine-shaft. Since our report, of 15th June, no work has been done in any of the levels above the 70, with the exception of a month's labour in the 50 and the 60, but which were again suspended. The 70 fm. level is now about 32 fms. east of the east diagonal shaft; the lode in that end is 3 ft. wide, of which 18 in. is ore of fair quality, producing 3 tons of ore per fm., worth 5*l.* per ton. Our expectation in driving this level is fixed upon finding a dip of ore from a piece of productive lode, which we had in the 60, and which we hope to fall in with at about 7 fms. in advance of the present end. The 80 fm. level is now just under the east diagonal shaft—that is, about 32 fms. behind the 70; the lode is 2½ ft. wide, without ore; this level, however, has been a productive one, almost the whole of its length from the engine-shaft, and we regard the present poverty of the end as but temporary, expecting soon to find an improvement. The 90 east is now driven 5 fms. from the sump; of this, the first 4 fms. were driven on the north branch of the lode, and continued upon this branch, until it joined the lode. The ore produced in these 4 fms. was 5 to 6 tons per fm., worth 6*l.* per ton. On falling in, however, with the main lode, the ore has failed at present (the main lode itself, for the fathom we have opened upon it, being poor). We are now driving south to cut through the lode. We can scarcely venture an opinion as to the results of the 90, in driving eastward—having yet seen but so little of the main lode at that level. We may here notice an impression, which appears to have been made on some of the company, that we have lost the main lode in the deeper levels. Such is not the fact—our working in those levels having been pretty much on the north branch of the lode, has probably given rise to this notion; but the lode itself continues its usual underlie south of the branch, and in the deepest level we are now working upon it. In reporting the levels west of the sump, we first notice the 90, which has been driven about 7 fms. on the north branch, producing six tons of ore per fm., worth 6*l.* per ton. There is still a good lode in the end, but the branch is now closely approaching the main lode (which has been left standing in whole to the south), and will soon fall into it. The 80 fm. level is suspended for a short time, while we are driving a cross-cut north from the main lode to cut the north branch. We have driven this cross-cut 2 fms., and expect that we have 4 to 6 more to cut the branch. As the branch has been so productive in the back of the 90, we are inclined to hope favourably of it at this level. In sinking the engine-shaft, we cut the north branch about 3 fms. under the 80 fm. level. It continued crossing the shaft, at a slight angle, down to the 90, where it is now on the south side of the shaft; for the 7 fms. we sunk on it, it produced 6 to 7 tons per fm., worth 6*l.* per ton,—and in the bottom of the shaft, it still remains of the same quality. It may be expected to fall into the lode, in the further sinking of the shaft, about 5 fms. below the present bottom. The workings on this branch are now of material assistance to us. In the last sampling, we had about 70 tons of ore from the ends and pitches now at work upon it, the value of which may be taken at 400*l.* From James's shaft, we have had two levels, the 60 and 70. The 60 is at present suspended, while we are sinking a winze by a small cross-course, in a piece of grey ground, 3 fms. behind the end. We have sunk 7 ft. under the level, in a lode 3½ ft. wide, producing 4 tons of ore per fm., worth 5*l.* per ton. In the 70 we have been driving off the main lode upon a branch, which, being small and poor, we are now cross-cutting north to the lode, which is probably at 2 fms. distance. You are aware that the stopes in the bottom of the 60, west of James's, have not answered the expectations we formed, while driving that level. In the last sampling, however, we sampled from them 65 tons of ore, worth about 320*l.*, the average tribute being 8s. In driving the 50 cross-cut south, to cut Wheal Charles lode, we are now 15 to 20 fms. beyond the point at which we expected to intersect it. Just at that point there is a small branch, not an inch big, which we fear must be the vein itself, diminished almost to nothing. It is barely possible that a bend in the run of the lode may have so altered its eastern course, as to bring it south of the end, and upon this slender chance we are still driving, but shall not pursue it much longer.

In Wheal Charles, the 40 fm. level is now driven to within 3 to 4 fms. of Monckton's shaft. For the last 40 fms. we have driven that level through a productive lode, averaging 3 tons per fm., worth 4*l.* per ton. In the last sampling we had 54 tons of ore from this level, and the pitches above and below it, worth about 200*l.* We expect in a few weeks to hole the 40 to Monckton's shaft, and shall then be able to increase our returns of ore from it. The 50 fm. level continues poor, but it is now advanced so far as to come nearly under the productive ground in the 40, and we are hoping for a speedy improvement.

In Wheal Sparrow we have at length resumed the driving of the 30 fm. level, west of Turner's shaft, from which it is now extended 18 fms. westward; the lode in the present end is small, about 1 ft. wide, producing a ton of ore, of low quality—we are looking for an improvement in this level, as it is approaching the dip of an orey piece of ground in the 20. The 40 fm. level is now about 65 fms. west of Richards's—this level has generally been poor; the lode in the present end is 1½ ft. wide, producing 2 tons per fm., worth 3*l.* per ton. The 30 having been driven west through a good orey lode in the ground under which the 40 is now advancing, we expect to find a continuation of the ore in this level. In our last sampling we had from Wheal Sparrow 46 tons of ore, worth about 140*l.* With respect to our prospects for the future, we must leave them to be inferred from the preceding particulars. For September and October the returns will meet the costs of the mine, and for two or three samplings forward, beyond which we scarcely feel at liberty to give any confident opinion. We expect to have sufficient ore to meet, or nearly so, the current expenditure. So long as we continue to do this, with the chances of new discovery in our favour, we should recommend that our operations be kept on upon their present scale. All the tutwork now going on, with the exception of the 50 cross-cut in Wheal Charles, is essential to the efficient working of the mine; besides which, we must make early preparation for resuming the sinking of the engine-shaft. Towards the cost of this, the branch of ore in that shaft will materially assist. In every other branch of our expenditure we have economised as closely as circumstances permit, and are unable to offer suggestions for any further reduction.—W. RICHARDS; T. TREVENEN; R. WILLIAMS.

The report of the directors, referring to the preceding report, was then submitted:—

The directors cannot do better than refer the proprietors to that passage in their report to the general meeting in June last, in which they stated, that if disappointed in the hope they then reasonably entertained of a speedy return of profit, and that the costs should continue to exceed the raisings of the mine, it would be the directors' duty to call the adventurers together, and take their opinion as to the course to be pursued. The directors regret to say, that their hopes of so speedy a return of profit have been disappointed, and that the outlay on the mine still continues to exceed its expenditure; and, in consequence, since the last meeting, there has been an addition to the then debt of the mines. The directors still continue to have the most unabated confidence in the ultimate success of the adventure, in which they consider themselves fully borne out by the reports of the agents of the mines, which will be laid before you. Not a doubt can be reasonably entertained but that the adventure should be further prosecuted. The directors feel it quite impossible for the adventure to go on without a diminution of some portion of the debt, and a supply of further capital—having for some time been obliged to take up, on their personal responsibility and the credit of the mine, larger sums than, except from the great expectations entertained of its ultimate success, would be prudent; as well as, from time to time, to advance sums from their own pockets. Being precluded, from the constitution of the company, from making calls on the proprietors, there seems no other mode of raising further capital than by an issue of further shares, as on the former occasion, which shares, to prevent the depreciation of their property, which would otherwise occur, they would recommend the proprietors to take up themselves, *pro rata*, according to their interest in the mine. It is requisite to raise a sum not less than 3000*l.*, which the directors propose to the company to raise by an issue of 1200 shares, at 2*l.* 10s. a share, to be apportioned to the proprietors at the rate of one for every four shares, being equivalent to a call of 12s. 6d. a share. Failing the proprietors taking the shares, the directors think they should be authorised to issue them to the public, at any sum not less than 2*l.* 10s. a share; the directors, of course, so issuing them as the exigencies of the mine may require, and at such higher sum as they may be able to obtain. The only other mode of raising the necessary capital would be by issuing preference shares; but this course would, in the opinion of the directors, be injurious to the property of the present proprietors, and, with the confidence they still entertain in the mine, they cannot recommend that course to the adventurers; but, of course, that mode is open to the meeting, if they choose to adopt it.

General Statement of Accounts.

Acceptances not yet due	£4426	11	8	Cash at bankers	£1119	12	0
Outstanding debts	1350	19	10	Ore sold this day (estimated)	1550	0	0
Dues	70	0	0	Balance	4087	8	1
Tyas's bill (solicitors)	192	9	11				
Salaries	400	0	0				
Tweedy, Williams, and Co.	285	11	2				
Total	£6757	0	1	Total	£6757	0	1

In reply to a shareholder, the chairman stated that the debts of the company were about 4000*l.*; that it was contemplated to issue 1200 shares at 2*l.* 10s. per share each, which would be *pro rata* one share to every four shares held in the company, as at present constituted, consisting of 4800 shares: this would be in perfect consonance with the original deed of settlement of the company; and as regarded the nominal price put upon the share, he considered such of little moment much that he believed at least three-fifths of the capital required would be subscribed for at the moment.

Mr. HERRON wished to know what was the deficit at the last meeting?—In reply to which we understood the CHAIRMAN to state, that the debt then owing (May) was 2800*l.*; it was right, however, to observe, that the accounts were made up only to 30th March, and that the increase of 1200*l.* was that arising from the losses incurred since that period.

Mr. WILLIAM TAYLOR begged to direct the attention of the meeting, and more particularly that of the chairman, to the observations he had made some 18 months back; when it was proposed to increase the capital by the issue of shares to the amount of 3000*l.*, and which had been done; but he would now ask, what was the result? Why, that money was sunk, and they were now 4000*l.* in debt; he for one considered they should at once wind up the affairs of the company; and if anything was coming to the unfortunate shareholders, to let them divide it, but certainly not to increase their losses. The reports of the directors and agents evidenced so much discrepancy, that he thought it would not only be creditable, but just and honest, on the part of the directors, and the shareholders, to put an end to the concern.

Mr. TYAS considered it was unfair on the part of the proprietor who had last addressed the meeting, to advert to any one particular part of either the report of the agents or the directors. He (Mr. Tyas) held a large interest, and represented several friends; he considered it would be the height of imprudence to abandon the undertaking. He referred to the report presented in June last, when it was distinctly stated by the directors that, if the sanguine expectations they then entertained were not realised from the profits of the mine, a further issue of shares, or some other course to provide funds to meet the engagements and liabilities then existing, would be indispensable.

Mr. HERRON, as a holder of 100 shares, expressed his confidence in the undertaking, and his satisfaction with the reports presented to the meeting; they had now arrived at the point from which good results were to be anticipated. He thought it would be well if a call of 1*l.* per share was made, which would not only clear off the demands upon the company, but give available funds to the directors to prosecute the works. Capt. Richards, their agent, who was present, and who held a large interest, entertained a high opinion of the mines, and was willing to advance a further capital; and the idea of abandoning the undertaking was, in his opinion, too absurd to bear a moment's reflection.

Capt. W. RICHARDS, being called upon, reiterated the opinions conveyed in the report submitted to the meeting, and entered into some detail as related to the several points of working—concluding his observations by expressing his conviction that a few months would, he doubted not, turn the scale, and bring the mine to a profitable issue.

Mr. I. M. WILLIAMS (of Scorrier House), being referred to as to the opinion entertained by him of the value of the mine, stated that he, with his relatives, held more than one quarter part of the mines; that he had every confidence in the agents; and, moreover, that the mine was weekly visited by himself, or one of their agents. He should most cheerfully contribute towards any call which might be made, or take his proportion of any additional shares which might be created.—A lengthened conversation ensued, which, however, resolved itself into the adoption of the resolution, proposed by Mr. I. CAMPBELL, and seconded by Mr. DESBOROUGH, to the effect that 1200 shares, at 2*l.* 10s. per share, be added to the present capital, making 6000 in all; which being carried unanimously, three-fifths were at the moment subscribed for.

A vote of thanks to the chairman having been passed, the meeting adjourned.

WHEAL HOLWELL MINING COMPANY.

A meeting of the adventurers, convened by circular from the secretary, was held, pursuant to notice, on Tuesday, the 10th of Nov., inst., at the office King-street, Cheapside—such being an adjournment of the meeting, held on the 29th ult., but postponed, in consequence of the absence of JOHN EDWARDS, Esq., who, on the present occasion, filled the chair.

Mr. CROFTS having read the notice convening the meeting (which, by-the-bye, if we might judge from the slight attendance, should in this, and on all similar occasions, be duly advertised), proceeded to read the report from Capt. Clymo—the CHAIRMAN having, antecedent thereto, briefly stated to the meeting that the object for which they had been called together, was to determine on the rules or regulations to be entered in the cost-book, whereby the proceedings of the company would be in future determined, as also to receive the account of expenditure, and to appoint a committee of finance.

REPORT.

Wheal Concord, Nov. 7.—I yesterday inspected Wheal Holwell, accompanied by Capts. Tabb and Floyd, who pointed out the boundaries of the sett, and the excavations made on the lodes. The sett is very extensive, being about three-fourths of a mile from east to west in the direction of the lodes, and about the same distance from north to south. Five lodes are said to have been discovered, all underlaying north at different angles of inclination. Their appellations are according to their situations—No. 1 being southernmost, and the numbers progressing as you proceed north. I was informed No. 1 lode had been opened on, but the pit had been filled in, consequently I could not see it. On No. 2 lode a pit has been sunk 9 feet, where the lode is 12 feet wide, it dips north rapidly in a stratum of white killas, and is composed of gossan, quartz, and small portions of iron—I consider this a lode of good promise. A vertical shaft has been sunk 8 fms., with the intention of seeing it about 10 fms. below surface; but has been suspended without accomplishing the object, and has now 4 fms. of water in it. Considerably north-east from the spot where No. 2 lode is to be seen a shaft has been sunk 3 fms., on No. 3 lode, which is nearly full of water; I was informed the lode is 4 feet wide, and was able to judge of its composition by the stuff drawn up, which is quartz decomposing, stained with the oxide of iron. The stratum about this lode is blue killas. No. 4 lode has been seen in your sett, but the workings have been filled in. It is exposed to view, however, in an adjoining sett 40 fms. west from your western boundary. There it is 3½ feet wide, of very fine gossan, decomposed felspar and flookan, and other ingredients common to lodes near the surface. It has a northerly dip of about 3 feet per fm. Altogether, I have seldom seen a lode just opened which pleased me so well. This is thought to be Wheal Concord lode, and, as far as its course can be ascertained, the supposition is rendered probable. I could not see No. 5 lode, because the pit in which it was discovered has been filled; but was told it is situate 20 fms. north from No. 4. It is reported, a cross-course passes through the centre of the sett. I consider No. 2 and No. 4 lodes as presenting very good indications for copper in depth, and their development seems to promise successful results. Your sett, however, is but partially explored at surface, and it is highly probable, if search were made, many other lodes might be discovered. I would, therefore, advise you to costean across the sett, and to sink a few fathoms on the most promising lodes you may intersect, which would place you in a fair position to determine how to proceed three or four months hence.—J. B. CLYMO.

The report from Capt. Clymo having been read, as also the accounts for May, June, and July, submitted, amounting to 107*l.* 17s. 4d., a copy of the proposed rules or regulations was read, whereupon it was resolved unanimously that the rules then read to the meeting, with certain amendments or alterations, as suggested, be received and entered in the cost-book, and form the basis on which the company's operations be carried on.

The CHAIRMAN observed, that heretofore there had been no finance committee appointed—a trifling expenditure had been incurred, as would be seen by the cost-sheets, amounting to 107*l.* 17s. 4d.; but as such had not been examined, he could only refer the meeting to the several items of which they were composed, but which would, doubtless, come more legitimately before them, after having been submitted to, and approved by, the finance committee, which he assumed they would then appoint.—A committee of finance was accordingly named, and duly elected—the names of the several gentlemen forming such committee being inserted in the advertisement, which will be found in another column.—Some slight conversation having ensued on subject of the cost-sheets, and one or more items having been observed upon, it was resolved, that the same be referred to the committee, who be requested to convene an early meeting, when the same may be placed before the adventurers, with the view of their being passed.—The appointment of the London and Westminster Bank (Southwark branch) was then determined upon.—The CHAIRMAN having directed the attention of the meeting to the necessity of a call, to liquidate the trifling cost already incurred, as well as to meet the further expenditure, which for the ensuing four or five months would be on a moderate scale—being principally confined to costeaning the lodes, as recommended by Capt. Clymo, or testing them at shallow depths from surface, and from which he anticipated beneficial results arising.

Mr. JERDEIN, without wishing to limit the amount to be called per share, or to dictate what such amount should be, suggested that the call on the shareholders should not be more than was deemed essentially necessary, and which he understood from the chairman would be fully covered by a call of 5s. per share being made, which, after some slight discussion, in which Mr. Hall, and other adventurers, took part, was agreed to—the period for payment of the same being fixed at one month.—Thanks having been voted to the chairman, the meeting separated.

EAST WHEAL ROSE.—At the meeting of adventurers, held at the mine, on the 5th inst., the accounts were submitted, and a dividend of 20*l.* per share agreed upon. The accounts presented showed a balance at the last account of 5122*l.* 2d., added to which the sales of ore, amounting to 6938*l.* 8s. 11d., with the profit on Cargoll, 750*l.*, and other charges, together 92*l.* 9s. 10d.—making a total of 12,912*l.* 18s. 11d.; on the other side is cost for July, including surgeon and club, 1966*l.* 10s. 10d.; and August, 1714*l.* 12s. 8d.—to which is to be added—merchants' bills, 1760*l.* 17s. 6d.; coal, 250*l.*; income tax, 100*l.*; machinery, &c., 349*l.* 10s. 9d. SUBSCRIPTION TO RELIEF FUND, 1000*l.*; with dues, 450*l.* 19s. 8d.; and interest, 11*l.* 11d.; making together 7588*l.* 11s. 11d.—and thus leaving a surplus of 5319*l.* 7s.; from which, however, is to be deducted the dividend payable of 20*l.* per share, or 2560*l.*—the balance, or 2759*l.* 7d.—being carried to the credit of the adventurers.

TING TANG CONSOLS.—At a meeting of adventurers, held at the mine, on Tuesday, the 3d inst., the statement of accounts showed the tutwork cost for July and August, as 1006*l.* 3s. 4d.; tribute cost, 101*l.* 6s. 2d.; merchants' bills 928*l.* 13s. 9d.; balance of last account, 1325*l.* 15s.—3361*l.* 18s. 3d.—By call made last account, 1536*l.*; copper ore sold (less dues), 378*l.* 17s. 9d.—1814*l.* 17s. 9d.; showing balance against mine of 1547*l.* 0s. 6d.; to cost divided this day 6*l.* 0s. 10d per share, 1546*l.* 13s. 4d.; leaving balance carried forward to debit of next account, 7s. 2d.—It was then resolved, that the accounts, showing balance of loss to end of August, of 1547*l.* 0s. 6d., having been audited and examined, be al-

lowed, divided, and collected forthwith.—The following report from Capts. W. and T. Richards, H. Crougey, and T. Ellery, was read to the meeting:—We beg to lay before you a few remarks relative to this mine, and we are happy to have it in our power to congratulate you on our present prospects. The past two months exploring has made considerable improvements, likely to be of continuance. In the 120 fm. level, east of John's engine-shaft, we are cross-cutting north through the lode (which the winze below the 110 is being sunk upon); and although the end is about 6 fms. behind the winze, we have a very promising and grey lode about 2 ft. wide—this ore seems to be coming in sooner than we anticipated, as the ore generally dips east. The winze sinking below the 110 is looking very well, producing from 5 to 6 tons per fathom of good quality copper ore, and, provided it could be wrought dry, might be let at 3s. 6d. in the 1*l.* tribute. The 120 driving west of John's in the granite about 30 fms. is a promising lode, 2 ft. wide, with a leader of rich yellow ore from 3 to 4 in. wide, which augurs favourably. The 90 west of Skinner's in the granite 25 fms., lode about 2 ft. wide, producing rich stones of grey ore, improving every fathom in driving. The 60 west of Skinner's large gossan lode, not much mineral. The 110 east of Roache's engine-shaft, large lode with spots of ore. George's shaft being sunk below the 35 fm. level, on Wheal Squire lode, has not improved as we expected from the appearance of the lode in the 20—still we think the lode deserving further trial. At the last meeting the estimated loss, for September and October, was at 400*l.* to 500*l.* per month, but we think it will not exceed 550*l.* for the two months.

WHEAL REETH.—On Wednesday last, a meeting of adventurers was held at the account house, in the parish of Uny Lelant. During the last quarter, the income has rather exceeded the expenditure, and there will be no call, to a certainty, before February, 1847, when, we understand, the subject of erecting another engine will be discussed; and it is hoped that the produce between this and that will enable what we state to be accomplished without even then calling upon the adventurers for any portion of the costs. J. Batten, Esq., was elected purser, in the room of Mr. Bousstow, deceased. On the whole, the prospects of the mine were considered satisfactory.

LANIVET CONSOLS.—There not being a sufficient number of shareholders present to constitute a meeting, such was adjourned—it being understood that a special meeting will be convened on an early day.

MINING IN MERIONETHSHIRE—NEW COMPANY.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—The inhabitants of this quiet place, especially those connected with mining enterprise, have been far more excited by the publishing of the letter, signed "Cader Idris," in your paper of the 7th, than they were by the issuing of the prospectus of the above company—(and, Mr. Editor, many thanks are due to you for the publishing of this said letter; for I do not mind confessing *to you*, that we, simple-minded people, are contented with reading your valuable paper, and are not sufficiently fashionable to have a longing for the sight of the *Morning Post*, and, therefore, without your kind notice of the letter, we should all have been here in blessed ignorance of the fears of our ancient friend, "C. I."); but, to the subject of his letter, the finding of gold in this country—firstly, informing you, Mr. Editor, that being only personally known to Mr. James Harvey since his residing here, I am quite unable to say, if the sum of 50,000*l.*, spoken of as the purchase-money of the gold mines, &c., is correct; but I believe that I speak the feelings of my fellow inhabitants, when I declare that I shall be very pleased, if our ancient friend's account is a true one; for Mr. James Harvey has proved himself a generous-hearted, spirited Englishman—one, who must have spent a vast sum of money here in mining operations, and well does he deserve to reap a rich reward for his enterprising and untiring exertions.

"Cader Idris" tells you, he does not believe in the existence of gold to be found here to the extent of 14 to 17 ozs. to the ton in any quantity. Now, I am disposed to admit, there may be a doubt if such quantities of the precious metal can always be found as 14 to 17 ozs.; but does not our "Cader Idris" know that even 3 or 4 ozs. of gold to the ton of stuff is very rich and extraordinary, and will most handsomely repay the working of some—that there is that quantity found in very large quantities of gossans and ores (and, in many instances, far richer than the 17 ozs.), is quite beyond a question; and if our ancient friend will bustle about, and take a stroll some five miles from the town, he will be fully satisfied I am telling the truth, and that I am warranted in saying there is gold—plenty of gold—here.

I am sure, on application to Mr. James Harvey (or to Mr. Clement, a gentleman of great experience, and who is now manager of the gold mine, sold by Mr. Harvey, I believe), he will have every opportunity afforded him of perfectly satisfying himself as to the existence of gold, not only in gossans, but in the rock; and I am disposed to think that, after examination, he will admit his fears, as to the result of working for gold, are groundless; and that the aristocratical editor is rather premature in his chimerical belief—also that Merionethshire is fast advancing to its proper position—that is, proving itself to be the richest mineral district in Europe. Now, Mr. Editor, I must claim your indulgence for the length of this letter: I would not have occupied so much of your valuable space, if I had not the full interest of my country at heart; and the feeling that doubts might arise in some minds, from the reading of "Cader Idris's" letter, and so retard the onward movement of our locality, is, I trust, sufficient apology for thus troubling you. I had almost forgotten to mention to you, that Sir Henry de la Beche (the geologist) was here a short time *back*, and personally inspected the gold mine (sold by Mr. Harvey), and I am told he was satisfied it was *no chimera*. Now really, indeed, I think "Cader Idris" should have given his aristocratic friend, the editor, the benefit of this information, before allowing him to put forth his views on the subject—"C. I." must *have been aware* of Sir Henry's visit.—GWIR: *Dolgelley, Merioneth, Nov.* 10.

[ADVERTISEMENT.]

WHEAL TRELAWNEY LEAD AND SILVER MINE, CORNWALL.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—The lodes, or sett, were discovered by three common miners, to secure which they were obliged to get to join them a responsible person; they did—a Mr. Carpenter, and with two others added, secured the sett. During the above arrangements, the veritable Messrs. James and Peter Clymo scented a very favourable sett was to be granted, through information, under secrecy, from one fellow-labourer to another. Those parties agreed to meet Charles Trelawney, Esq., the lord, on the ground, which was done; and Mr. Trelawney required the names of the adventurers and first discoverers of those lodes. James Clymo, with *modest diffidence and assurance*, boldly asserted, at the onset, *he and his party were:* which was a barefaced falsehood, and instantly detected by Mr. Trelawney, who immediately commisserated with the above poor men, and miners, and exclaimed, "My men, you shall be fairly treated."

The license was granted to Messrs. James and Peter Clymo and Mr. Carpenter, each having a third—Mr. Carpenter being the responsible holder on the part of the lesser adventurers. When the *bonâ fide* company was formed, the *modest* request of Messrs. Clymo to Mr. Carpenter was—throw the first discoverers out, or give them any portion you choose from your third, letting us (most honourable men) enjoy solely our two-thirds. Mr. Carpenter's quaint reply was—No; it is late in the day for me to commence plundering unprotected men; I would rather lose my arm than do so; he had hitherto through life a character to lose, and it was not, he hoped, through wily knaves, now to be lost. Messrs. C., disappointed in this effort, made a second proposition—instead of having a portion taken from their two-thirds, it was for Mr. Carpenter to divide his third with those men and lesser adventurers, which he would not agree to—the Clymos showing themselves perfect dogs in the manger, grasping at the whole benefits, knowing at the time Wheal Trelawney was decidedly good, and could be worked immediately at a comparative small expense.

To show the Clymos' extreme *liberality and honour* to the poor men, who first informed them of this prosperous-looking affair, after trifling by every subterfuge to dispose of them, without a dole of payment, they awarded to three men each three shares a piece, the mine then divided in 128ths; while Mr. Carpenter divided his third of the mine equally with the other adventurers.

This, Mr. Editor, has been the *upright* proceedings of Messrs. Clymo, prior to further *honourable* conduct on Wheal Mary Ann; I, and every adventurer of Wheal Trelawney, were led to believe that Miss Pollard's grant of Wheal Mary Ann, was to be obtained *solely* and *positively* for the adventurers of Wheal Trelawney, each shareholder to have his fair proportion of Wheal Mary Ann, according to his or their holding in Wheal Trelawney. Before Miss Pollard's sett was secured, a printed circular was sent to the adventurers of Wheal Trelawney, calling a special meeting, in order to make arrangements to secure a particular piece of ground from another proprietor, to enable the said company to block in Miss Pollard's sett, and prevent its working, unless connected with Trelawney. The adventurers met according to the wishes and instructions of Messrs. Clymo; this piece of ground was secured, with a monstrous consideration for the same, although it was not done without strong opposition from the other adventurers. The Messrs. Clymo had private interest clashing with the proprietor of this ground, and, consequently, persevered to carry their point, though it was then stated, and has been found, of no available use or value to the company. Mr. Peter Clymo pressed and held out, it was only done for the best interest of the Trelawney adventurers with Miss Pollard.

Another honourable proceeding, which took place at a meeting at the White Hart, Menheniot, some little time before an adjourned meeting took place at the Fountain Inn, Liskeard—a meeting to which some of the adventurers wished to introduce you, Mr. Editor, but your admittance was refused, as this transaction was to come out—it was this (Mr. Peter Clymo was in the room, Mr. James Clymo in ambush close at hand, in case of need—the affair being so glaring he was not wanted)—a piece of land, with its *sett* adjoining Wheal Mary Ann, which those worthies were desirous to get at for the benefit of Wheal Mary Ann, to oust Trelawney adventurers from, then thinking Mary Ann was their own property, this affair was to have been done under the rose at an enormous figure. If the Messrs. Clymo had used their *superior knowledge and sound judgment* in pursuing their proper and honest duties for their employers, and secured Wheal Trehane, which was to be then had at a nominal value, and is now working rich; instead of studying chicanery and subterfuge, and leading all parties into litigation and difficulty, they might have recovered that confidence which had been long on the wane, and now inevitably gone—thought by every well-thinking man to be past redemption. The above is only a second edition of such mining judgment, as before exhibited, when West Caradon was lost to the adventurers of South Caradon (the west being by far the richest mine), and lost for want of judgment and discretion, and unwarrantable grasping for a few pounds, and sordid monopoly. Added to these numerous worthy deeds, you know and have exhibited a portion, connected with the arbitration of Wheal Mary Ann, in your Journal of the 31st ult.

How is it to be expected that the present adventurers can confide in Mr. Peter Clymo being managing agent and purser, his uncle as surface and underground captain, and brother-in-law managing book-keeper and clerk? Is it to be imagined that we can be satisfied that justice is done to us under such circumstances? indeed, for my part, I shudder, with others, when I calculate upon the prospect of a just account of their stewardships. *O tempore! O mores!*

Liskeard, Nov. 10. A SHAREHOLDER.

ANALYSIS OF SOME AUSTRALIAN COPPER ORES.

TO THE EDITOR OF THE CHEMICAL GAZETTE.

SIR,—Considerable interest having been excited lately upon the subject of Australian Mines, I beg to send you the results of the analysis of a few copper ores, which were submitted to me by the Australian Mining Company. The large tract of country belonging to the Australian Mining Company, from whence these ores were brought, is situated about 30 miles to the eastward of Adelaide, in South Australia, and about 10 miles from the River Murray. The ores which have as yet reached this country are represented to be merely *surface* ores, and their outward appearance, as well as their chemical composition, evinces clearly enough that they must have been exposed to the influence of the atmosphere for a considerable period. Although but little or no scientific interest can be attached to the analyses of ore so changed by atmospheric influence, yet the large amount of copper which is yielded by the bulk of the ore may, perhaps, be thought worthy of attention by those engaged in mining pursuits; for if portions of surface ores will yield so large a per centage, what may not be expected from that which is still concealed, and has not suffered by exposure to the atmosphere?

A great portion of the ore consists of a dark brown heavy rock, through which is disseminated copper pyrites. The analysis showed it to contain—sulphuret of copper, 38·21; oxide of copper, 15·22=38·8 per cent. copper. The largest quantity of ore yet imported consists of a siliceous rock, thickly interspersed with the blue and green carbonate of copper. A specimen selected, in which the blue mineral predominated, was found to consist of—oxide of copper, with a trace of sulphuret, 41·80=33·36 per cent. copper.—A specimen of the same ore, in which the green carbonate was in greater quantity, gave—oxide of copper, 17·57=13·567 per cent. copper. A specimen, bearing every resemblance to copper pyrites, gave—sulphuret of copper, 40·525=32·29 per cent. copper. A specimen, in which sulphuret of copper was disseminated through a dark brown rock, much of which from exposure to the atmosphere had become ochreous, and was interspersed with carbonate of copper, gave—sulphuret of copper, 26·65=21·24 per cent. copper. The last specimen that was analysed was ochreous, with veins of iron glance, and much carbonate of copper—oxide of copper, 22·97=18·33 per cent. copper. The object desired by the company, for which the assays were undertaken, being to ascertain of what the ores were composed, and what per centage of copper was contained in the minerals forming the chief bulk of each specimen of ore, the above gives the results.

Middlesex Hospital, Nov. 13. E. RONALDS.

[FROM A CORRESPONDENT.]

CONTRACTS OF ENGLISH COAL FOR THE FRENCH GOVERNMENT.—We alluded, in our Journal of the 24th Oct., to the contracts then about to be entered into by the Minister of Marine and the Post-office department, for supplying those two important branches of the Government with English coal, for the service of the steamers. On the 28th, the first contract was signed at the Ministry of Marine, for the furnishing of 6,000,000 lbs. of rock coal, for the use of the steam-vessels belonging to the French squadron, cruising off the southern and western coast of Africa, for the suppression of the slave trade, to be delivered at the Islands of Bourbon, St. Mary's, Madagascar, and Mayotte—Messrs. Henry and Co. (of Havre), having made the lowest tender, were declared the contractors of the whole for 9320*l.* On the 30th ult., the Post-office administration concluded the contract for being supplied with 79,200,000 lbs. of English rock coal, to be delivered at Calais, Marseilles, Malta, Athens, Constantinople, and Alexandria (in Egypt), for the use of the French Royal-mail steam-packets. Mr. Falan (of Calais) became the contractor for these packet stations, at the rate of 19s. 2d. per ton; and Mr. Jackson (of London) for Marseilles, Malta, Athens, Constantinople, and Alexandria, at the rate of 35s. 10d. per ton. On the 19th inst., the Minister of Marine and Colonies will be ready to receive tenders for the supply of 1,000,000 kil. of English rock coal for the use of steam-vessels, to be delivered at Cayenne (French Guiana); the terms of the price offered by Government are deposited at the office of the Minister of Marine, Paris; at the French Consulate, Newcastle; and the offices of the marine commissariat, at the ports of Dunkerque, Havre, St. Servan, Nantes, Bordeaux, and Marseilles. The above two contracts having been conceded to the fortunate competitor, Mr. Jackson, who has hitherto had the chief supplying of the Ministry of Marine and Post-office departments, has created the greatest jealousy among the French contractors, and coal mine proprietors of the Loire, St. Etienne, Rive de Gier, &c.; but more particularly the shipping interest, as the deliveries will be made in British vessels. It is a well-known fact, that the coal basins of France are of that inferior quality of bitumen, that the Government is reluctant to use it for their steam-packets and steam navy; and, however disagreeable it may be to the coal proprietors of France, they have but little chance in the market—therefore, let the Newcastle and Durham merchants be on the *qui vive*.

Our esteemed contemporary, the *Moniteur Industriel*, which may be considered the champion and organ of the anti-free trade party in France, has for a long time combated, with its usual virulent spirit of monopoly, against any measures, that the Government might be inclined to submit to the Chambers, for the reduction of the import duties on British iron, cast metals, machinery, coal, &c. In their paper of Sunday last, the 8th inst., they quote the article which appeared in the *Mining Journal* of the 24th October, respecting the contracts for British coal for the French mail steam-packets at Calais, Marseilles, Malta, Athens, Constantinople, and Alexandria (which has been decided in favour of Mr. Jackson, of London); and also our remarks on the monopoly of the iron and forgemasters of France, in the Journal of the 31st ult. In answer to his observations and *amertume*, that the Post-office department should have accepted the contract tenders of Mr. Jackson, instead of those of the other proposers, we have only to observe, that it is a well-known fact, that the French contractors cannot afford to offer on so low terms as the English for distant parts, as their freightage is too high for a remunerating profit, and frequently they cannot get ships sufficient in France: whilst at Newcastle we have always plenty of well-built colliers ready to proceed to any part of the world with their cargoes, and at reasonable rates. Our worthy contemporary agrees with us, that the demand for British coal is extending annually in France, not only for steam navigation and other purposes, but he maintains that their coal proprietors have nothing to fear by English competition, as to the superiority of our coals over their own, but that, unfortunately, they cannot compete with us in the markets as to price; and admits that, if the import duties were reduced, it would be the means of stopping, in a great measure, the spirit of enterprise now displaying itself, in working the coal districts throughout France, and, in all probability, close many of the smaller basins, which could not stand against the large importations that would fill the markets and ports from one end of the country to the other—as railway directors, and all other speculators, would, as a matter of course, go to the cheapest as well as best mart. If French coal is not inferior to ours in quality, how is it that nearly all the Government contracts of the Minister of Marine and Colonies, the Post-office, and other departments, announced in the journals, are particularly specified must be—"*Charbon de terre en roche, d'origine Anglaise pour bâtimens a vapeur?*"—if they could obtain equally as good coal from the mines of the Grand' Combe, Loire, &c., and that at lower price! We admire the nationality of our Gallic friend, in every point which concerns the commercial aggrandisement of his party; but he must be aware, that the spirit of free trade is progressing rapidly throughout all the leading cities and parts of France. The system of monopoly is now generally considered as the hydra of despotism, for the benefit of the few to the detriment of the many, and most fatal to a friendly intercourse with other nations. A great commercial revolution is working throughout the whole globe; and the day is not far distant when monarchs, as well as selfish monopolists, will have to succumb to the march of intellect, and the enterprising spirit of the people they oppress by taxes to support their own ambitious and unenlightened views. Our contemporary enters fully into the cost, price, and working of coal in Belgium, England, and France, and maintains that, after all, the advantage is in favour of the French collieries, because they give higher wages, and are satisfied with less profit. This is, certainly, a very curious argument; as it is well known that the expense of carriage is so great, and the quantity of coal obtained so limited, that there are but few proprietors, except monopolising companies, who can compete at all with the importations from England and Belgium, and that at a little profit. Now, with respect to the monopoly of the iron and forgemasters of France, and the inconvenience, delays, and expenses, the proprietors of railways have to submit to from non-fulfilment of their contracts, and the combination which exists between them to keep up high prices is too well known, and has been fully exposed in all the liberal French journals, to require any further comment from us on this disgraceful system, which, unfortunately, prevails among the iron and forgemasters, to extort the highest rates, or they will not complete their contracts, however prejudicial it may to the different enterprising companies.

We, therefore, hope the day is not far distant when the French Government will see the necessity of putting a stop to such a combination, by admitting British wrought, cast, and sheet iron, at a reduced duty, which is the general wish of all commercial men, with the exception of our friend (the *Moniteur Industriel*), and its anti-free trade party.

We refer our readers to an engraving, in another part of our paper, of Mr. Motley's truly ingenious plan for constructing wrought-iron bridges, together with a history and description of his invention—the combination and mode of erecting—which appears to us as *vastly superior to suspension bridges, besides being very much cheaper*. Sanctioned, as the plan has been, by the first mathematicians of the age, we think our readers and the public will not say that we exceeded the bounds of truth, in describing Mr. Motley (the author of the letter in our last, signed "Philanthropy"), as a very talented, ingenious, practical engineer. The plan and arrangements appear very simple and effective—being principally composed of triangles, which, as Mr. Davies Gilbert, in his letter to Mr. Motley, says, is *the figure of strength*. The principle and properties of the design are so admirably described in Dr. Birkbeck's letter, to which we direct particular attention, that it is not needful for us further to remark thereon—we close our observations by saying, that we fully agree with the doctor's views, and willingly join with his wishes, expressed in the following extract from his able and eloquent letter:—"The most accurate attention, which I have been able to direct to the examination of your intended bridge, has not enabled me to discover any well-grounded objection; and assuming the sufficiency of the abutments, both for thrust and traction, the adequacy by trial, or calculation of the substance of every part, and of their junctions, and the excellence of the strong tenacious elastic material, which you propose to employ, *the firmness and security of the fabric cannot be disputed*. With these views of the essential qualities of the arch, and my admiration of its appearance, as stretching across the valley, at once beautiful and romantic, of the Avon, I cannot but entertain a very ardent wish that they, upon whom rests the decision, may be induced to adopt it. The structure will, I am persuaded, do honour to the present advanced condition of practical mechanics, and the taste of the influential inhabitants of Clifton and Bristol, and will ever prove ornamental to natural scenery, of a description so splendid as to render almost unindurable the ordinary ponderous productions of art. That you may succeed is the belief, not less than the wish, of—G. BIRKBECK."

Current Prices of Stocks, Shares, & Metals.

MINES.—Since our last report, we find the mining share market has not receded from that satisfactory state to which we then referred, and there are still strong manifestations of a progressive improvement. There are buyers of shares in the numerous new mines at former quotations, but there does not appear any great desire to advance on these prices. This may, in all probability, arise from two causes—the lowness of the quotations, and the many shares which are pressed on the market by holders of larger interests than they can conveniently command, to meet the calls necessarily made to carry out the effectual operations of the various mines. At the same time, we are pleased to find that, in new mines which hold out much promise, the calls are generally most cheerfully responded to. Several mines in the eastern district of Cornwall, and on the borders of Devon, especially are spoken of as in an improved state; and there appears but little (if any) doubt, that this locality will become a most important mining district, whether we regard its mineralogical products (copper, lead, or tin), we find improvements have manifested themselves in each, for which these minerals are respectively wrought for. Several transactions, in the following shares, have been effected during the past week:—West Wheal Maria, Arvose, Wheal Concord, Wheal Fortescue, North Fowey, Great Michell Consols, Wheal Walter, Lamherooe Wheal Maria, Harrowbarrow Old Mine, Trehane, Stray Park, Trelawney, West Wheal Jewel, South Francis, Tincroft, Callington, Lewis, Cleveland, Treviskey and Barrier, Wheal Mary Ann. In the foreign share market much activity has also prevailed, but more especially in Bolanos, Alten, Del Monte, and St. John del Rey.

MONEY MARKET.—Money continues remarkably easy, both in the Stock Exchange, and in the discount market: notwithstanding, it appears that some of the railway companies are understood to have been selling Exchequer bills and stock, because they find means of employing their cash to greater advantages. It is, however, more likely that, in face of falling foreign exchange, with the prospect of a rise in the value of money, railway companies, if they have been sellers of Government securities, have been taking advantage of present prices, to realise funds for better employment hereafter.

RAILWAYS.—In the share market there has been an apparent disposition to realise the profits made by the advance, which has generally taken place in the "light shares," during the last week, and, accordingly, stock has been generally cheaper. In "heavy" shares nothing worth notice has been done, and on the whole railway transactions have been very limited in the City. At Manchester, Birmingham, Leeds, and Bristol, the same dullness has prevailed. The North Staffordshire, Birmingham, and Shrewsbury shares have a little improved; London and Blackwall has once more attracted the attention of the dealers, as an eligible investment; and a fair amount of business appears to have been done in the Chester and Birkenhead, in Liverpool; Leeds and Dewsbury have been rather in demand, and ran up to 16 prem. The fall in the price of corn throughout the country will, no doubt, have a beneficial effect on the market. The Government *Gazette* has published several extra supplements, during the week, giving the names of upwards of 400 different railway applications, to be made next session, either for new lines, extensions, or other improvements—so that engineers, lawyers, witnesses, and the members of committees, have plenty of business traced out, during the ensuing Parliamentary campaign, which, as usual, will open in February next.

MEETINGS.—The following railway meetings have taken place during the week:—LONDON, SALISBURY, AND YEOVIL: a general meeting of shareholders was held at the London Tavern, on Wednesday, to consider the situation of the company's affairs, and to decide on the course to be adopted. The report stated that, in consequence of the present state of the money market, the committee of directors had entered into negotiations with the directors of the South Western, with the view to obtain such a modification of existing arrangements as would enable the shareholders of the London, Salisbury, and Yeovil, to retire. The South Western to pay down 20s. per share on the shares issued, towards the expenses incurred,—and a further sum of 30s. per share, in the event of the bill being got for the line from Salisbury to Yeovil; also, to pay the excess of the expenses of the London, Salisbury, and Yeovil Company, beyond the amount of deposit of 50s. per share, of the extent of 5s. on the number of shares issued. The South Western, it was stated, offered to pay 20s. at once, and 30s. more on obtaining power to construct a line to Yeovil, and further that the liabilities exceed the assets. After some discussion, the report was adopted—as was also a resolution confirming the agreement with the South Western Company.—NEWMARKET AND CHESTERFIELD: a special meeting also took place of this company, at the London Tavern, for the purpose of obtaining the sanction of the shareholders to an agreement proposed to be entered into with the Eastern Counties. The substance of which is—that the Eastern Counties shall lease the above line, with the branch to Cambridge, when completed, at 5 per cent., on a capital of 350,000*l.*; and that, whenever the 14*l.* 16s. stock of the Eastern Counties should exceed 7 per cent., the other line would be increased 2 per cent. more, and so upwards. The Eastern Counties to pay the interest of all moneys borrowed by this company, plus the 350,000*l.*, together with an allowance for establishments and expenses. The Eastern Counties, also, to take the extension lines to Thetford, Bury St. Edmunds, and Ely, when completed, on the above terms. Interest of 4 per cent. on all calls, past and future, to be paid by the Eastern Counties. The report was adopted, and the resolution for agreement carried.—EASTERN COUNTIES: a special general meeting was held at the London Tavern, on Thursday, for the purpose of considering and determining upon the conversion of all the 14*l.* 16s. shares into shares of 20*l.* each, by the payment of 1*l.* 4s., and the addition of 4*l.* bonus, to take dividends from the 4th January next; and also, for considering and determining on the granting of equal advantages to the Northern and Eastern Railway Company. The meeting was also made special, for the purpose of granting to the holders of Eastern Counties (York extension) shares the right to subscribe all further capital now required, or hereafter to be required, for the purpose of the company, until the same be paid in full. The meeting was numerously attended—George Hudson, Esq., M.P., in the chair; when the suggestion of a great portion of the proprietors, announced at a former meeting, to separate, by some means, the stock created by the 4*l.* bonus, from the other stock—in other words, to have two classes of shares—viz.: one of 15*l.*, by the payment of 1*l.* 4s., and another class of 5*l.* shares—were adopted. The honourable chairman entered very fully into the details of the progress of the numerous branches, and length of railways, connected with the Eastern Counties, and the agreements entered into with them, and those to be applied for next session, which were highly satisfactory. During the last half year the traffic had increased in the Eastern Counties line nearly 50 per cent., which would enable them to pay a dividend of 7 per cent., though only 18 miles of additional line had added to its traffic. At present they possessed a line of railway of 176 miles, which had been contracted at an average cost of 41,000*l.* per mile. With those branches finished, they had a total of 235 miles—which, with those projected, would make them have 417 miles of line, at the average cost altogether of 27,966*l.* per mile; and he hoped that, in July next, he should be enable to declare a dividend of 7 per cent. The contemplated projects were carried unanimously, and a vote of thanks was passed.—WEAR VALLEY: a special general meeting was held, at their offices, in Darlington, on Thursday, for the purpose of considering the expediency of taking on lease, or of purchasing, the Bishop Auckland and Weardale Railway, the Weardale extension, the Wear and Derwent, and the Shildon Tunnel Railways, with the conditions on which a lease should be taken. The report of the progress making was very satisfactory, and the resolutions to the above effect carried unanimously.—BISHOP AUCKLAND AND WEARDALE, &c.: at the close of the preceding meeting, the proprietors of the Bishop Auckland, &c., Railways, met for the purpose of considering the expediency of leasing their lines, &c.—when resolutions, in accordance with those passed at the above meeting, were adopted.—DURHAM: a general meeting of the proprietors was held yesterday afternoon, at the offices of the London and North Western Company, Euston-square, for the purpose of considering an offer made by that company. Mr. George Stephenson, the chairman, stated that the offer of the London and North Western Company was to refund them all the money they had expended, to take upon themselves the debts and liabilities of the company, and pay them 4 per cent. on the whole. The terms were considered highly favourable, and were unanimously agreed to, and a vote of thanks passed to the chairman.

RAILWAY SHARE LIST.

RAILWAYS.	Paid	Closing pr. last week.	Closing pr. last night.
Aberdeen	£20	19½	18¾
Amber, Nottingham, Boston, and Erewash Junction	2½	2¾	2½
Armagh, Coleraine, and Portrush—25l. shares	1¾	—	¾
Birmingham and Gloucester—100l shares	100	129	128½
Birmingham and Oxford Junction—20l shares	2	8¼	8¾
Bristol and Exeter—100l shares	75	81	—
Bristol and Gloucester—50l per share	30	50½	50¾
Caledonian—50l per share	25	24	24
Chester and Holyhead—50l shares	27½	24	23¾
Direct Northern—50l shares	2½	1¾	1¾
Eastern Counties—25l shares	14¾	22½	22¾
East Lancashire, 25l. shares	14	18½	19½
East Lincolnshire	1¼	1	1½
Edinburgh and Glasgow—50l shares	50	76	75
Edinburgh and Northern	12½	15	15¾
Edinburgh and Perth	3	1¾	2
Exeter, Yeovil, and Dorchester—50l shares	5½	3¾	3½
Goole and Doncaster—20l shares	42s	½ dis.	¾ dis.
Grand Union (Nottingham and Lynn)	1¾	—	¾
Great Southern and Western (Ireland)—50l. shares	27½	29½	29½
Great North of England—100l shares	100	236½	236
Great Western—100l shares	85	139	137
Guildford, Fareham, and Portsmouth—50l. shares	5	—	—
Hull and Selby—50l shares	50	108	108
Lancaster and Carlisle—50l shares	50	68	68
Leeds and Bradford	30	75	75½
Leeds and Carlisle	2½	—	—
Leicester and Birmingham—20l shares	22s	—	¾
Leicester and Bedford—20l shares	22s	¼ dis.	¾ dis.
Liverpool, Manchester, and Newcastle Junction	2½	1¾	2
London and North Western	stock.	197½	198
London and Blackwall	Av. 16l 13s 4d	9¼	8¾
London and Brighton—50l shares	50	59¾	59½
London and Croydon—guaranteed 5 per cent	9l	9¾ 10	—
London and Greenwich	Av. 12l 15s 4d	9½	9½
London and South Western	Av. 41l 6s 10d	67¾	67
London and York—50l shares	2½	2½	2½
London, Salisbury, and Yeovil—50l shares	2½	1¾	1
Londonderry and Coleraine—50l shares	15	—	9
Lynn and Ely—25l. shares	15	16	16
Lynn and Dereham—25l shares	15	15½	15½
Manchester and Leeds—100l shares	82	106	105
Manchester and Birmingham—40l shares	40	74½	75
Manchester, Buxton, and Matlock—20l shares	42s	1½ pm.	1½ pm.
Manchester and Southampton	2	1	1¾
Midland	Stock	134½	132
Ditto Birmingham and Derby	Stock	107	106
Newcastle and Berwick—25l shares	20	33	33½
Norfolk	Stock 100l	132	130½
North British—25l shares	25	37½	37½
Northern and Eastern—50l shares	50	70	71
North Kent and Direct Dover—50l shares	2½	—	—
North Staffordshire—20l shares	42s	2¾ pm.	3¼ pm.
Oxford, Worcester, and Wolverhampton	12½	6¾	7½
Portsmouth Direct—50l shares	3¾	—	4¾
Preston and Wyre—25l shares	25	35½	33¾
Richmond—20l shares	15	—	—
Scottish Central—25l shares	12½	20½	20¾
Scottish Midland—25l shares	12½	13½	13¾
Sheffield and Manchester—100l shares	100	—	—
Shrewsbury and Birmingham	3	3½	4
South Devon—50l shares	35	28	28
South Eastern and Dover	Av. 33l 2s 4d	38½	37¾
South Midland—20l shares	42s	—	—
South Wales—50l shares	5	4½	4½
Vale of Neath	2	—	1½
Waterford and Kilkenny	11	5 dis.	4
Welsh Midland	2½	—	—
West Riding Union	42	1½ pm.	1¾ pm.
Wilts, Somerset, and Weymouth—50l shares	10	3¾	3½
York and Carlisle	2½	¾	¾
York and North Midland—50l shares	50	97	101
Ditto Selby—50l shares	40	86½	87½

FOREIGN RAILWAYS.

	Paid	Closing pr. last week.	Closing pr. last night.
Boulogne and Amiens—20l shares	16	14¾	14¾
Bordeaux and Toulouse and Cette (Mackenzie)—20l shares	2	—	—
Bordeaux, Toulouse, and Cette (Espalete)—20l. shares	2	1	¾
Central of Spain—20l shares	2	—	¾
Dutch Rhenish—20l shares	6	5½	5½
East Indian	¼	¾	¾
Great Northern of France (constituted)	5	11½	10¾
Great Western Bengal	¼	¾	¾
Jamaica and South Midland Junction—20l shares	1	—	1
Louvaine a la Sambre—20l shares	6	1¾	1¼
Lyons and Avignon—20l shares	2	—	—
Luxembourg	4	1½	¾
Namur and Liege—20l shares	8	3½	3½
Orleans and Vierzon—20l shares	10	—	12½
Orleans and Bordeaux—20l shares	6	7¾	7¾
Paris and Lyons Constitu ed	5	5	5½
Paris and Orleans—20l shares	20	—	—
Paris and Rouen—20l shares	20	35½	35¾
Rouen and Havre—20l shares	20	27	26½
Sambre and Meuse—20l shares	10	5	4¾
Strasburg and Basle—14l shares	14	—	—
West Flanders	6	3	3

RAILWAY TRAFFIC RETURNS.

From these returns, it will be seen, that the amount of traffic for the last week, on nearly 2760 miles of railway, was 151,560l., thus accounted for:—78,135l. for the conveyance of passengers only, 41,040l. for the carriage of goods, and a remainder of 32,383l. for passengers and goods together, not respectively apportioned; being an increase over the corresponding week of last year of 12,279l.

Name of Railway.	Lgth. Rway.	Present actual cost.	Last Div.	Traffic Returns. 1846	1845
Arbroath and Forfar	15	£142,900	3p.c.	£236 6 5½	£143
Chester and Birkenhead	15	658,293	2½	624 6 4	594
Dublin and Drogheda	32	699,975	3¼	772 5 11	761
Dublin and Kingstown	6	349,736	9	893 7 7	774
Dundee and Arbroath	17	156,324	6	282 11 5	241
Durham and Sunderland	19	302,118	2	687 15 9	764
E. Counties & North. & East	161	4,746,113	5	9152 12 7	6106
Eastern Union	—	—	—	—	—
Edinburgh and Glasgow	46	2,112,136	6	3863 6 4	2849
Glasgow, Paisley, and Ayr	53	1,301,381	7	2105 8 5	1899
Glasgow, Paisley, & Greenock	23	829,427	2	902 12 5	801
Gravesend and Rochester	7	82,828	—	—	186
Great Western	241	8,585,605	8	17580 6 0	18678
Hartlepool	—	—	—	—	1323
London and North Western	440½	16,327,526	10	38180 9 3	36436
London and Blackwall	4	1,081,273	1½	829 1 5	811
London & Brighton & South Coast	113	4,670,721	5	7774 16 0	5498
London and South-Western	106	3,648,547	10½	6438 16 8	6564
Manchester & Leeds	117	4,636,556	8	8953 13 9	6689
Manchester, Bolton, & Bury	10	842,725	5½	—	958
Midland Company	331	8,831,195	7	18036 11 5	16749
Newcastle and Carlisle	65	1,137,385	5	2212 14 7	11846
Norfolk	59	985,080	5	1457 5 4	1185
North British	72	1,461,195	—	1126 7 11	—
Preston and Wyre	29	432,014	2½	635 15 6	490
Sheffield and Manchester	49	1,633,331	5	1841 0 0	1240
South Devon	15	778,976	—	318 10 5	—
South-Eastern and Dover	120	6,613,535	3½	7758 19 10	7072
Taff Vale	30	690,229	5	1192 3 2	1214
Ulster	25	358,353	5½	834 19 0	718
York and North Midland	163	2,092,979	10	5948 6 10	5291
Northern of France	260	—	4	9004 0 0	
Orleans and Bordeaux	72	599,040	4	1573 0 0	
Paris and Orleans	82	2,082,916	9½	5663 0 0	6627
Paris and Rouen	85	1,995,306	8	—	

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

WEDNESDAY.—Adair's Main 16 6—Buddle's West Hartley 18 6—Davison's West Hartley 19—Hasting's Hartley 18 6—Original Tanfield 15 6—Ord's Redheugh 16—Stewart's Hartley 17—Shaftoe Hartley 16 6—Taylor's West Hartley 16 6—West Hartley 19—Wylam 18 6—Wall's End Clennell 17 6—Clarke and Co. 17 6—Hebburn 19 6—Hilda 19—Belmont 20 6—Braddyll's Hetton 20 9 to 21—Caradoc 20 6—Kelloe 20 9—Adelaide 21—Seymour Tees 20 3—South Durham 19 9—Tees 21—Howard's West Hartley Netherton 19.—Ships at market, 32.

FRIDAY.—Adair's Main 16 6—Buddle's West Hartley 17 6—Davison's West Hartley 18—Hasting's Hartley 17 9—Holywell Main 18 6—Old Pontop 15—New Tanfield 15 6—Ord's Redheugh 16—Tanfield Moor 18 6—West Hartley 18—Wall's End Belmont 20—Lumley 19 6—Stewart's 21—Braddyll's Hetton 20 9—East Hetton 19 2—Haswell 21—Hetton 20 9—Lambton 20 6—Richmond 19 2—Shotton 20 3—Wearmouth 20 6—Whitwell 19 3—Cassop 20 9—Thornley 20—Gordon 18—Ships, 132; sold, 109; unsold, 23.

ROCKS BLASTED BY EXPLODING COTTON.—A letter, from Stuttgard, of the 2d November, says:—"On Thursday last, experiments for blasting rocks in the tunnel of Laupen were made with exploding cotton. The experiments were made under the direction of Professor Fehling, in the presence of different scientific men, and were attended with the happiest results. It was remarked, that the explosion was greater when the excavation made to receive the cotton was narrow and very deep, which is explained by the quantity of cotton required for the explosion taking more room than that of powder, so that if the excavation was not deep the cotton would protrude. It is also necessary for the excavation to be not only narrow and deep, but broader below than above. To effect the explosion, a quantity of cotton, eight or ten times less in weight than that of powder, is requisite. The cotton has another advantage, not leaving any smoke behind it, as is the case with gunpowder."

PRICES OF MINING SHARES.

*** We are favoured with the quotations and corrections of "R. B.," and "M. W. B.;" and, on reference to our list, they will find attention has been paid to them respectively; and we have since found their prices corroborated by transactions here.

We are obliged for all the information we can obtain, so as to render as correct a share list as possible—but must decline the corrections submitted by "J. A. J.;" for, on reference to our City Correspondent, we find that he is a seller of Heignston Down Consols and West Wheal Treasury's, at our present quotations.

We inadvertently quoted Pentuan Wheal Mary and Wheal Fortune Consols erroneously last week—having since learned that the former had been sold at 4l., and the latter at 6l. per share.

BRITISH MINES.

Shares.	Company.	Paid.	Price
1024	Alfred Consols	4¾	35
235	Andrew and Nangiles	25½	30
1000	Barristown	4½	27½ 30
4000	Bedford	2¾	3¾
128	Besore Lead Mine	14	30
320	Birch Tor Tin Mine	19¾	14
8000	Blaenavon	50	40
256	Bodwannick	3	—
100	Botallack	175	300
120	Brewer	—	5
10000	British Iron, New, regis.	10	19
—	Ditto ditto, scrip	10	19
128	Budnick Consols	52½	45
100	Bwich Cwmerfin	20	—
1000	Callington	19	25
256	Caradon Consols	45	25
256	Caradon Copper Mine	9½	1
256	Caradon Mines	15	24
256	Caradon United	24	12
256	Caradon Wh. Hooper	12	7
1000	Carn Brea	15	100
114	Charlestown	—	200
166	Cleveland	9	7½
1900	Combmartin	5½	4½
1000	Comblawn	¾	2
128	Comfort	—	40
5000	Con. Tretoil Mining Ass.	3¾	¾
128	Condurrow	36	55
2560	Cook's Kitchen	—	4
1000	Copper Bottom	1	5
1024	Cosheen	4½	30
240	Craddock Moor	15½	24
128	Creeg Braws	120	200
580	Cubert Mine	12	30
7100	Derwent	8½	5
1024	Devon & Courtney Con.	5	5
1000	Dhurode	2	5
186	Dolcoath	—	40
10000	Durham County Coal	45	9
256	East Alvenney	3	10
112	East Caradon	40	40
2048	East Crowndale	3½	2
128	East Pool	5	20
100	East Relistian	15	17
9000	East Tamar Consols	1½	2¾
—	East Wheal Albert	1	3
94	East Wheal Crofty	—	275
256	East Wheal Fortune	1½	3
256	East Wheal Kitty	¼	1
128	East Wheal Rose	50	1100
123	East Wheal Seton	9	25
512	Fowey Consols	—	40
20000	Galvanised Iron Co.	10	8
10000	Gen. Mining Co. for Irel.	¼	¾
1000	Godolphin	—	—
256	Gonamena	21	85
128	Gover	23	200
244½	Grambler & St. Aubyn	—	28
100	Great Consols	1000	400
256	Great Callestock Moors	11½	12
2560	Great Michell Consols	2	4½
256	Great Resugga Moor	1¾	3
512	Gt. Wh. Rough Torr Con.	1	22
100	Grogwinion	5	—
1000	Gunnis Lake	1½	3
1000	Hanson	14	3
1000	Harrowbarrow Old Mine	5½	3
1000	Harrowbarrow Consols	2	¾
800	Hawkmoor	3	2
6000	Heignston Down Con.	1	2
256	Herodsfoot	14	7
10000	Hibernian	12½	1
—	Hobb's Hill	4	3
1000	Holmbush	18	13
256	Ivy Tor	1½	2½
827	Kirkcudbrightshire	3¾	5½
2048	Lamherooe Wh. Maria	8	3¾
2048	Lanivet Consols	2½	2
200	Larkholes	1	3
160	Levant	—	90
1000	Lewis	15	12
1280	Llancynfelin	6	10
128	Ludcott	3	3
4000	Marke Valley	10	3½
5000	Mendip Hills	1½	1½
20000	Mining Co. of Ireland	7	12
200	Nanterrow Consols	14½	10
128	North Fowey Consols	15	25
100	North Pool	11	61½
70	North Roskear	10½	300
256	North Treburget	4	4½
100	North United	41	20
256	North Wh. Leisure	1½	4
128	North Wh. Providence	2½	10
256	North Wheal Rose	26½	10
15000	Northern Coal Co.	23	2
600	Old Delabole Slate Co.	25	45
128	Par Consols	—	900
256	Pembroke	¼	2¾
256	Penhallow Moor	15	4
6000	Pennant	1	1½
100	Penrhiw	30	65
128	Pen-y-Cefn Mine	50	55
1280	Perran St. George Un.	13	20
128	Perran Wh. Virgin	9½	40
512	Plymouth Wh. Yeoland	1½	3½
2048	Prince Edward	1½	1½
256	Redruth Consols	3	14
10000	Rhymney Iron	50	25
256	Rose Consols	10	3
1000	Rosewall Hill	1	5
2500	Silver Valley	3	2
256	Sourton Consols	3½	3
128	South Caradon	10	350
2000	South Dolcoath	2	—
256	Sth. Friendsh. Wh. Ann	7½	14
200	South Harvannah	23	26
194	South Tolgus	2½	7
800	South Towan	10	1½
256	South Trelawney	12½	9
128	South Yeoland	16½	20
128	South Wheal Basset	—	120

BRITISH MINES—*continued.*

Shares.	Company.	Paid.	Price.
124	South Wh. Francis	67	175
256	South Wh. Hope	—	5
1000	South Wh. Maria	2¾	2
256	South Wheal Rose	11½	1
10000	Southern & Western, Irish	1	2
256	St. Austell Consols	7	15
94	St. Ives Consols	—	600
1000	Stray Park	43	19
9600	Tamar Consols	3	5
1024	Tavy Consols	1¾	3
6000	Tincroft	7	11
256	Ting Tang	89	20
128	Tokenbury	124	15
256	Trehane	—	18¾
5000	Treleigh Consols	6	3¾
256	Trenow Consols	—	75¾
96	Tresavean	10	225
120	Trethellan	5	20
120	Treviskey and Barrier	61	130
256	Trewallack	—	15
128	Trewellard	12	25
000	United Hills	5	1½
4100	United Mines	300	800½
256	Wellington Mines	15	50
128	West Basset	45	10
256	West Caradon	20	180
128	West Cargoll	2	12
512	West Fowey Consols	40	35
—	West Kekewich Consols	—	3
256	Wheal Kekewich	4	6¾
256	West Providence	—	12
200	West Seton	—	50
120	West Trethellan	5	25
256	West United Hills	4	3
256	West Wh. Friendship	7½	4
3845	West Wheal Jewel	11	2½
2560	West Wh. Maria	½	1½
256	West Wheal Shepherd	—	6¾
256	West Wheal Tolgus	21½	7
256	West Wheal Treasury	14½	10
240	Westerlake	3	3
6000	Wicklow Copper	5	16
184	Wheal Adams	41	25
1000	Wheal Agar	—	—
256	Wheal Albert	10	8
128	Wheal Acland	13	2
256	Wheal Allen	½	4
368	Wheal Anderton	10½	11
128	Wheal Aun	—	50½
128	Wheal Arvose	2	—
2560	Wheal Barbara	1½	1½
256	Wheal Blencowe	—	9
256	Wheal Byon Consols	½	¾
136	Wheal Clifford	—	190
1024	Wheal Concord	6½	5½
512	Wheal Elizabeth	2½	3
256	Wheal Fortescue	4½	6
2048	Wheal Frederick	2	2
384	Wheal Franco	25	27
512	Wheal Fortune Consols	1	6
256	Wheal Gill	19½	18
128	Wheal Harriet	45	48
2048	Wheal Holwell	1½	1¾
256	Wheal Jane	6	20
265	Wheal Kendall	11½	5
256	Wheal Louisa	5½	10
256	Wheal Maria (Hayle)	14½	28
1024	Wheal Maria	1	420
4000	Wheal Martha Consols	5	2½
256	Wheal Mary Ann	5	76
1024	Wheal Mary (Calstock)	4½	1¾
256	Wheal Mary Consols	34	25
256	Wheal Mary Lanivet	2½	8
256	Wheal Mary Pentuan	1	4
256	Wheal Maud	1½	4
128	Wheal Metha	16	100
256	Wheal Norris	9	3½
128	Wheal Pollard	12½	12
210	Wheal Prospect	4	9
128	Wheal Providence	34	40
128	Wheal Reeth	1	60
128	Wheal Rose	40	25
512	Wheal Sarah	2½	5
99	Wheal Seton	150	835
1024	Wheal Spearne	1½	8
256	Wheal Sisters	27½	20
128	Wheal St. Cleer	21½	15
260	Wheal Trelawney	7¾	130
256	Wheal Tremaine	1½	8
256	Wheal Trewennan	—	10
128	Wheal Venland	12½	10
256	Wheal Victoria	2	2
127	Wheal Virgin	—	50
1024	Wheal Walter	4	2¾
256	Wheal Williams	2	18

FOREIGN MINES.

Shares.	Company.	Paid.	Price.
5000	Alten Mining Company	14½	3
15000	Asturian Mining Co.	6	3
10000	Anglo-Mexican Co.	100	1
3374	Ditto Subscription	25	2½
2000	Bolanos	150	6
12000	Ditto Scrip	15	6
10000	Brazilian Imperial	20	4
12000	Cobre Copper Co.	40	18
8500	Colombian Co. regis.	55 }	4¾
5000	Ditto Scrip	— }	
10000	Copiapo Mining Co.	14	2½
20000	General Mining Ass'n.	20	15½
5051	Mexican Company	59	—
12000	Mocaubas & Cocaes	25	6½
29320	{ Bl. del Monte, regis. / Ditto unregistered }	28¾	av. 4
	Ditto Red Debentures	—	21
	Ditto Black ditto	—	18
	Ditto Loan Notes	150	120
7000	Royal Santiago	10	7½
2000	Pachuca Mines	3	3½
11000	St. John del Rey	15	8½
43174	United Mexican	28½	3½

*** *We should feel greatly obliged by agents, or others interested, furnishing us with such corrections for our Share List as we may not have received through our usual channels of information—our object being to present as accurate a list of prices as can be obtained—to procure which, we solicit the aid of correspondents in general.*

LATEST CURRENT PRICES OF METALS.

LONDON, NOVEMBER 6, 1845.

	£ s. — £ s. d.
IRON—Bar a..Wales..ton	8 15—9 0 0
„ ..London	0 0—10 0 0
Nail rods „	0 0—10 15 0
Hoop (Staf.) „	11 5—11 10 0
Sheet „ „	0 0—13 0 0
Bars „ „	11 0—11 10 0
Welsh cold-blast foundry pig }	5 5—5 10 0
Scotch pig b, Clyde	3 10—3 12 0
Rails, average	0 0—9 15 0
Russian, CCND c	0 0— —
„ PSI	0 0— —
„ Gourieff	0 0—15 0 0
„ Archangel	0 0—13 10 0
Swedish d, on the spot	0 0—11 10 0
„ Steel, fagt.	0 0—16 0 0
„ „ kegse	14 5—14 10 0
COPPER—Tile f	0 0—87 10 0
Tough cake	0 0—88 10 0
Best selected	0 0—91 10 0
COPPER—Ordin. sheets, lb.	0 0—0 0 10
„ bottoms	0 0—0 0 11
Chilian, in cakes	0 0— —
TIN—Com. blocks g..cwt.	0 0—4 18 0
„ bars	0 0—4 19 6
Refined	0 0—5 1 0
Straits h	4 18—4 18 6
Banca	0 0—5 1 0
TIN-PLATES—Ch., IC i, box	1 9—1 11 0
„ IX	1 15—1 17 0
Coke, IC	1 6—1 6 6
„ IX	1 12—1 12 6
LEAD—Sheet k..ton	0 0—19 5 0
Pig, refined	0 0—21 0 0
„ common	18 5—18 10 0
„ Spanish, in bd.	17 10—18 0 0
„ American	0 0—18 0 0
SPELTER—(Cake) l	18 15—19 0 0
ZINC—(Sheet) m export.*	0 0—28 0 0
QUICKSILVER n..lb.	0 0—0 4 6

[*From our Correspondent.*]

IRON.—Welsh and Staffordshire continue unaltered; in Scotch pigs business has been done at 69s. to 71s. per ton for No. 1, free on board at Glasgow, cash payment, and buyers are coming into the market freely to-day at the latter rate.

COPPER, TIN, TIN-PLATES, and LEAD, are precisely as last quoted, both as respects prices and demand.

SPELTER has been done at 18l. 15s. per ton for spring delivery—19l. being the quotation on the spot. This metal has become firmer within these few days.

[*Communicated by Messrs. Whitcomb and Barton, Old Broad-street.*]

The demand for English bar-iron continues steady. Welsh and Staffordshire pig-iron have been more enquired for, at better rates. The stocks are inconsiderable. Scotch pig-iron is in good demand at 71s. 6d. and 71s. for mixed Nos., cash; and 73s. 6d. bill, at three months. The business done in this article, during the week, has been limited, but holders are confidently looking for higher prices. Rails—very extensive orders are in the market at a trifle under our quotations, for present and extended deliveries. In other metals there is nothing worthy of remark since last *Mining Journal.*

GLASGOW PIG-IRON TRADE.

Nov. 11.—The market, which was rather drooping at the end of last week, has become very firm; and, although there is little business comparatively doing, holders are daily increasing their prices. The shipments are unusually large for the season of the year—amounting, last month, to fully 26,000 tons. We quote the price to-day at 71s. for No. 3; 72s. for mixed Nos.; and 73s. 6d. for No. 1—cash. DOUGLAS & HILL, Metal Brokers.

HULL, THURSDAY.—The market has been active throughout the week—the amount of business considerable, and, in many cases, remunerative. North British stock steady, as are also Darwens, Blackburn, Clitheroe, and North Westerns attracting notice; East Lincolnshires in request, and done off change as high as 10s. premium; Fleetwood firm at par; North Westerns in demand, at a few shillings advance, in consequence of a negotiation said to be going on. Leeds and Thirsks lower, without reason for the decline.

FOR SALE, a CONDENSING STEAM-ENGINE, of 20-horses power, just completing, by a first-rate London maker. This engine has been built to the order of a company, who now require one of a different description. For further particulars, and order to view, apply to Mr. Cooper, 8, Adelphi-terrace, London.

ADJOURNED SALE.—UPSET PRICE REDUCED.

EXTENSIVE AND VALUABLE IRON-WORKS, In close vicinity of the harbour of Aberdeen.

There will be again exposed FOR SALE, BY PUBLIC ROUP, within the Lemon Tree Tavern, Aberdeen, on Saturday, the 19th day of December next, at six o'clock, P.M., those extensive and valuable premises, at Footdee, Aberdeen (bounded on the west by the harbour), known as the "DEE IRON-WORKS," and long employed in the ENGINEERING and MILLWRIGHT BUSINESS, and in IRONFOUNDING, BOILER-MAKING, IRON SHIPBUILDING, BLACKSMITH WORK, BRASS FOUNDING, &c.

[Detailed particulars are unavoidably postponed until our next.]

For further information, apply to John Hunter, W.S., 13, Hill-street, Edinburgh; Wm. Robinson, advocate, 38, Castle-street, Aberdeen; or to Mr. Vernon, at the works, who will show the premises, and, on application, forward a plan of the buildings, and inventory of the machinery, tools, &c.—Aberdeen, Nov. 10, 1846.

COPPER ORES.

Sampled Oct. 28, and Sold at Andrew's Hotel, Redruth, Nov. 12, 1846.

Mines.	*Tons.*	*Price*	*Mines.*	*Tons.*	*Price.*
Carn Brea	82	5 15 0	Levant	52	9 1 0
ditto	81	4 7 0	ditto	48	8 16 0
ditto	77	7 19 6	ditto	47	6 10 6
ditto	76	5 2 6	ditto	26	2 10 6
ditto	71	8 6 6	ditto	7	40 7 6
ditto	70	4 6 6	Trenow Consols	52	6 16 6
ditto	61	8 7 0	ditto	36	3 19 6
ditto	59	4 15 6	ditto	12	6 4 6
ditto	54	4 4 0	Alfred Consols	70	4 1 0
ditto	53	3 17 6	ditto	27	8 4 6
ditto	43	3 13 6	Wheal Rodney	58	4 4 6
ditto	42	2 3 0	ditto	12	2 1 6
United Hills	98	4 8 0	Cook's Kitchen	49	3 6 6
ditto	67	7 5 6	ditto	15	0 7 0
ditto	64	3 9 0	West Wh. Treasury	53	5 2 0
ditto	54	3 18 0	Michell's Ore	33	2 5 0
ditto	38	4 0 6	ditto	2	4 1 0
Wh. Sparrow	46	3 0 6	ditto	1	13 10 0
Wheal Prosper	72	4 0 0	Carn Perran	21	4 0 0
ditto	63	5 17 0	ditto	8	2 12 6
ditto	61	2 16 6	North Wh. Basset	25	5 17 0
ditto	50	8 14 6	St. Ives Consols	20	8 16 6
Wh. Friendship	21	2 5 6	Wheal Agar	20	5 0 6
ditto	7	6 2 6	Gwinear Consols	19	2 18 0
Par Consols	103	7 11 6	Redruth Consols	16	5 19 0
ditto	93	10 15 6	Wheal Ruby	7	14 12 0
ditto	56	7 11 6	ditto	1	6 17 0

TOTAL PRODUCE.

CarnBrea	769	£4192 16 6	Cook's Kitchen	64	£168 3 6
United Hills }			West Wh. Treasury	53	270 6 0
Wh. Sparrow }	367	1642 2 6	Mitchell's Ore	36	85 17 0
Wheal Prosper }			Carn Perran	29	105 0 0
Wh. Friendship }	274	1355 15 6	North Wh. Basset	25	146 5 0
Par Consols	252	2206 10 0	St. Ives Consols	20	176 10 0
Levant	180	1547 19 0	Wh. Agar	20	100 10 0
Trenow Consols	100	572 14 0	Gwinear Consols	19	55 2 0
Alfred Consols	97	505 11 6	Redruth Consols	16	95 4 0
Wh. Rodney	70	369 19 0	Wh. Ruby	8	109 1 0

Average Standard ....£102 3 0 | Average Produce 8¼

Average Price per ton..........£5 13 6

Quantity of Ore .... 2399 tons. | Quantity of Fine Copper, 197 tons 17 cwts.

Amount of Money £13,615 6 6

LAST SALE.—Average Standard......£106 2 0.—Average Produce 7¾

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Mines Royal	198½	£1366 4 9
English Copper	399½	1474 0 6
Vivian and Sons	533½	3620 8 6
Freeman and Co.	415½	1790 0 0
Grenfell and Sons	257	970 12 0
Sims, Willyams, and Co.	138½	984 12 3
Williams, Foster, and Co.	457	3309 8 6
Total tons	2399	£13,615 6 6

Copper ores for sale on Thursday next, at Pearce's Hotel, Truro.—Mines and Parcels.—Devon Great Consols, Wheal Maria, and Wheal Fanny 1238—Poldice 336—Wheal Friendship 261—West Caradon 243—Fowey Consols 220—South To[illegible]—Wheal Jewel 140—Holmbush 106—Bedford United Mines 93—Hallenbeagle 74—Wheal Maiden 40—West Wheal Towan 18.—Total, 2932 tons.

Copper ores for sale on Thursday week, at Pearce's Hotel, Truro.—Mines and Parcels.—Consols Mines 917—United Mines 645—Tresavean 400—South Caradon 320—Perran St. George 314—Grambler and St. Aubyn 244—Par Consols 230—Treviskey 226—Treleigh Consols 195—Ting Tang Consols 122—Trethellan 115—Wheal Ellen 112—Barrier 100—Wheal Sisters 85—Wheal Comfort 80—Wheal Andrew and Nangiles 72—Wheal Clifford 64—Wheal Busy 51—Wheal Mary Consols 50—West Grambler 15.—Total, 4357.

COPPER ORES

Sampled October 21, and Sold at Swansea, Nov. 11, 1846.

Mines.	Tons.	Prod.	Stand.	Price.	Mines.	Tons.	Prod.	Stand.	Price.
Cobre	105	14¼	88¾	£10 8 0	Burra Burra	52	29¾	86½	£23 3 0
ditto	90	14¼	89¾	10 11 0	ditto	48	23¾	88¾	18 10 0
ditto	83	13¼	90	10 0 0	Cronebane	103	7¾	102	5 15 6
ditto	80	14¾	88¼	10 9 0	ditto	80	7½	104½	5 6 6
ditto	76	13¾	90½	9 17 0	ditto	52	7¼	103¾	5 5 6
ditto	61	14¼	89¾	10 15 0	Chili	50	46¾	85	37 12 0
Santiago	83	23¼	84¾	17 8 0	ditto	49	48¾	84½	38 18 6
ditto	80	16¼	86½	11 15 0	ditto	48	50¼	85	40 8 6
ditto	76	22½	85½	16 18 6	ditto	76	17¾	90½	13 16 6
ditto	72	15¼	89	11 10 6	Pennsylvania	101	10¼	93¾	7 5 0
ditto	64	23¼	83¾	17 10 6	ditto	58	13¼	92½	10 0 0
ditto	50	23¼	84¾	17 11 0	ditto	41	18¾	88½	14 6 0
Cuba	76	21¾	85½	16 4 6	Berehaven	120	9¾	99¾	7 7 0
ditto	55	22¾	83¾	16 18 6	Llandidno	55	9¾	99¼	7 6 6
ditto	52	22¼	85½	17 2 6	ditto	38	2¾	151½	1 7 0
ditto	50	22¼	84½	16 10 6	ditto	22	2¾	151½	1 7 0
ditto	44	21¼	85¼	16 2 0	Ballymurtagh	62	6¾	105	4 14 0
Burra Burra	66	34¼	86½	27 10 0	ditto	35	4¼	120	2 17 0
ditto	57	21¾	89½	17 4 6	Havana	36	11¾	91½	8 9 6
ditto	53	24¾	88¾	19 4 0					

TOTAL PRODUCE.

Cobre	495	£5111 17 0	Pennsylvania	200	£1896 11 0
Santiago	425	6499 8 0	Berehaven	120	882 0 0
Cuba	277	4589 2 6	Llandidno	115	483 17 6
Burra Burra	276	5906 4 6	Ballymurtagh	97	391 3 0
Cronebane	235	1295 2 6	Havana	36	305 2 0
Chili	223	6778 8 6			

Total tons, 2499.—Total amount, £34,140 16s. 6d.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
English Copper Company	410	£3457 2 6
Freeman and Co.	141½	1829 18 6
P. Grenfells and Sons	48	1940 8 0
Sims, Willyams, and Co.	276	4341 8 0
Vivian and Sons	1002½	11945 7 6
Williams, Foster, and Co.	621	10026 12 6
Total tons	2499	£34,140 16 6

Copper Ores for Sale Nov. 25.—Chili 95, ditto 91, ditto 86, ditto 79, ditto 97, ditto 96, ditto 50, ditto 47, ditto 42, ditto 11—Cobre 100, ditto 87, ditto 85, ditto 80, ditto 75, ditto 59, ditto 100, ditto 71—Berehaven 115, ditto 97—Cuba 100, ditto 90—Ballymurtagh 90—Kanmantoo 78—Cronebane 43, ditto 19—Kaw-aw 23—Llanidloes 7.—Total, 2005 tons.

SILVER-LEAD ORE

Sold at Finsbury-square, London, on the 11th Nov., 1846.

Mine.	*Tons.*	*Price per ton.*	*Amount.*	*Purchaser.*
Callington	105	20 15 0	£2178 15 0	Mullins, Brothers, & Co.

THAMES TUNNEL COMPANY.

The number of passengers who passed through the Tunnel in the week ending Nov. 7, was 17,633; amount of money, £73 9s. 5d.

THE GUN COTTON AND THE BOARD OF ORDNANCE.—The Board of Ordnance has rejected the proposal for the use of Schönbein's cotton in the British Army.

NEW WATER COMPANY.—A company has been formed and provisionally registered, under the title of the United Kingdom Artesian Water Company, for obtaining pure water by sinking artesian wells. The water used last year by the water companies is estimated at 314,566,012 hogsheads. And it is calculated that, from the chalk bed on which London is built, more than ten times the quantity needed for all the towns in England could be raised. The company propose, in the first place, to supply the public baths and washhouses, and, instead of iron, to use glass or porcelain pipes.

MEETINGS OF SCIENTIFIC BODIES DURING THE WEEK.

Society.	Address.	Day.	Hour.
Royal Botanic	Inner Circle, Regent's-park	Saturday	3½ P.M.
Statistical	12, St. James's-square	Monday	8 P.M.
British Architects	16, Grosvenor-street	Monday	8 P.M.
Chemical	Society of Arts, Adelphi	Monday	8 P.M.
Medical	Bolt-court, Fleet-street	Monday	8 P.M.
Pathological	21, Regent-st., Waterloo-pl.	Monday	8 P.M.
Linnæan	Soho-square	Tuesday	8 P.M.
Geological	Somerset-house	Wednesday	8½ P.M.
Royal	Somerset-house	Thursday	8½ P.M.
Antiquaries	Somerset-house	Thursday	8 P.M.
Asiatic	14, Grafton-street	Saturday	2 P.M.
Westminster Medical	27 A, Sackville-street	Saturday	8 P.M.

VENTILATION OF MINES.

OBSERVATIONS ON THE VENTILATION OF MINES: with a DESCRIPTION of a NEW MINE VENTILATOR. By WILLIAM PRICE STRUVE, Civil Engineer, Swansea. 4-2

London: Weale, 59, High Holborn; Varty, 31, Strand.—Swansea: Williams, *Cambrian* Office.—Price 6d., and by post 8d.

Just published,

TURNING AND MECHANICAL MANIPULATION. By CHARLES HOLTZAPFFEL, A. Inst. C.E., &c.

This work is intended for general reference and practical instruction on the lathe, and the various mechanical pursuits followed by amateurs. To be comprised in six volumes.

Vol. I. (Second Thousand).—On Materials—their differences, choice, and preparation—various modes of working them, generally without cutting tools. 4-3

8vo. cloth, pp. 462, and 315 woodcuts. Price 15s.,

Vol. II.—On the Principles of Construction, Action, and Application of Cutting Tools, used by hand—namely, chisels and planes, turning tools, boring tools, screw-cutting tools, saws, files, shears, and punches; and also of machines derived from these hand-tools,

8vo, in cloth, pp. 562, and 711 woodcuts. Price 30s.

Published by Holtzapffell and Co., engine, lathe, and tool manufacturers, 64, Charing-cross, and 127, Long-acre, London; and to be had of all booksellers.

The Prospectus, with Table of Contents, free by post.

NOTICES TO CORRESPONDENTS.

The MINING JOURNAL is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained before Twelve of all the news agents, at the Royal Exchange and neighbourhood.

THE MINING JOURNAL

And Atmospheric Railway Gazette.

LONDON, NOVEMBER 14, 1846.

We have to direct attention to the remarks of a contemporary on the state of the copper trade, which appears in another column; and need hardly observe, that the free-trade principle—if *principle* it can be considered in the present case—would appear to be advancing with gigantic strides; for our worthy contemporary, or his correspondent, forgetful that a boon was granted to the foreign miner in 1842, would actually lead his readers to believe that a tax was imposed. A memorial was *got up*, we know it well—the Cornish miners also presented their memorial—foreign ores were admitted, in common with British ores, for the purpose of smelting, and for home consumption or exportation, subject, however, to a duty imposed on their admission, according to the produce. Our contemporary seizes on this particular tax, and cries out aloud for its abrogation. Why, it must be manifest that he, or his correspondent, must either be unconscious of the merits or demerits of the case, put forward by him, or he must conceal them from motives which we would be sorry to attribute to him. The fact is—and he should know it—that until the late Premier made his first advance towards the repeal of the Corn Laws by his new tariff, and the abolition of duties in some instances, and the reduction in others, he tied his hand with the *underground* produce before he attacked the *surface*; and we will briefly recapitulate what he did—and what is the result? Foreign ores were up to that period only smelted in bond—and hence they were, or, at least, an equal produce in manufactured copper, obliged to be exported; the foreign mines, increasing in their returns, found it impracticable to obtain a foreign market, and, as a boon to the foreign miner, they were admitted, in common with our home ores, at a certain duty, which was, and is considered, by no means protective, as the present standard will readily demonstrate. Now, forsooth, the merchants and the others—the smelters are not even named, although we can "*sniff*" them as of the number, for they are "One and All"—they think fit to send in another memorial; and it will go hard with us if we be not prepared with one in reply for next Journal, to which we hope to have not only the assent of every one interested in mines in this country, but the signatures of those who obtain their hardly-earned wages by labour. We will once again appeal to the working miner, if that we do not find those, who should be their protectors, come forward, with spirit and proper feeling.

In our columns of last week, we adverted to the operations of a company, established for the make of iron in the Loire Inferieure; and, adopting the figures presented to us in the prospectus, which had been issued, as also having had access to official documents, we were induced to express our confidence in the undertaking, as to the results which might be calculated upon, to attend the extension of an outlay of capital, referred to, in an advertisement, which appeared in our pages of the day. A contemporary (the *Morning Post*)—the able articles of which, appearing from time to time, on the metal trade and mining matters, have been transferred to our columns on many occasions—would, however, appear from an article which we find inserted on the 10th inst., have assumed a position, and advanced arguments, which, we think, will be found, on examination at least, to have been hastily arrived at; while the deductions are, we have no hesitation in saying, incorrect. This, however, we tribute to the lack of information possessed by the writer of the article in question, or to some biassed statement submitted, on which he has founded his opinions. The case is simple in itself; and, as it is well known we ever prefer "fact and figures" to the most seductive language in which prospectuses may be couched, we will at once proceed to the notice taken by our contemporary, and in meeting his assertions (if not arguments), at least endeavour to establish the correctness, and support the views entertained by us, as expressed in our observations of last week. Our contemporary, in adverting to the operations of the company "La Jahottiere Iron-Works," observes that the prospectus states the cost at which they have smelted pig-iron does not exceed 4*l.* per ton, while the selling price is 8*l.* 17*s.*—thus leaving a surplus, or profit, exceeding 100 per cent. on the cost of the iron, without reference to the capital; while by the proposed increase of capital (say, 40,000*l.*), it is contemplated that the clear income, assuming present prices, would be 38,000*l.*, or 98 per cent., while the amount sunk is left out of the question, as being "not mentioned." Here we find our contemporary somewhat wanting in his ordinary intelligence and inquiry, as it must be clear, that a large capital must have already been expended to place the works in their present position; and hence the profit, if such be realised, is one divisable over the entire capital, and not that alone now proposed to be raised. It is, however, only fair that our contemporary should be in possession of full information, on which he may arrive at a conclusion, while we regret that he should have hazarded an opinion in its absence; and will, therefore, place before him the grounds submitted to us, from whence the deductions arrived at in their prospectus appear to have been drawn—it being, of course, understood that we vouch not for their accuracy, beyond the assurance we have received from parties connected with the undertaking, and the conclusion at which we have arrived, from a careful inspection of the weekly statements of consumption of fuel and ore, with cost of labour, and contrasting such with the market price of the manufactured material. However, perhaps it is first right we should follow our contemporary through the article referred to, and then place in juxta-position the affairs of the company, and the motives by which they would appear to us to be influenced. We are told, that the company, with all the prospects before them, "freely do they offer all" the shares in the additional capital to the public—we have this yet to learn; for the prospectus itself states, that "a portion of the new capital is subscribed by the present partners."

Now, this, we submit, amounts to mere "twaddle;" forwe believe it was never yet known, that an additional capital was created without a public meeting being convened of the shareholders, and, furthermore, an announcement of its object, for such does not preclude the present shareholders from increasing their interest—while it may be, perhaps, although we have no authority for even hinting at the possible chance, that some one or other may have gone far enough as regards the outlay of capital. It is true we may be met by the remark that, in such case, have they not a right to demand a premium from the incoming capitalist or adventurer? Assuredly they have, if the premises advanced be correct—but should they wish to associate with them parties, who will bring in an additional capital, and increase the profits by an extension of the works, and, at the same time, afford facilities thereby for the introduction of the anthracite of South Wales (a point untouched upon by our contemporary), we can very well understand that, by admitting a co-partner, with capital, on equal terms, we may far increase our profits, although we nominally diminish our interest: this is too apparent to require argument. Our contemporary next observes, that no French authority is quoted. It, certainly, is somewhat novel the idea, that an English company should quote French authorities beyond the quoted prices of iron, as given in the Price Current—the tariff, or duty, on imports, and the prices at which the materials are obtained and converted—all of which we presume may be referred to, as in our case, ere we offered a word in favour of the measure. Statistics beyond the price of manufacture, and that of sale, with the estimate for extension of works, and the relative produce, are as unnecessary and futile as if we were to call for a statement of the estimated number of gallons of water in the Lake of Haarlem, the power of the engine employed, the computed quantity of coals required, the number of years, days, or hours, necessary to effect the desired object, and the presumed outlay. We are next told, "it is strange that the shares are not offered in Paris or Nantes itself, where the particulars of the mineral property and works can be easily ascertained." This, we must say, is somewhat "far fetched," for it is, *a priori*, assuming that there are no parties in this metropolis who can render the information, or whose representations are not to be listened to, or assurance taken—while our contemporary would appear to lose sight of the proximity of Paris or Nantes to this country, rendered comparatively so close from the facilities afforded by transport of steam, where the information could be at once confirmed, or, if misrepresentation be made, that it might at once be exposed; and we may here remark, for the information of our contemporary, that the whole of the capital, heretofore expressed, is English money, and not one shilling, as we are informed, derived from the *Bourse* of Paris, or the manufacturers of Nantes.

We are told, that "the French people are shrewd enough when their own aggrandisement is in question." How absurd is this attempt at reasoning. We would ask, whether the French people are the holders of all the shares in the railways of France?—Are they the holders of all the French rentes?—Are they the parties whose capital is solely invested in manufactories and other establishments, not to advert to mining undertakings?—We answer at once, such is not the case. It was only some few weeks since, that in our Journal we adverted to a case, as cited by our Paris correspondent, of the employment of English capital; and but a short period before were we consulted on the establishment of a company, with some 120,000*l.* to 150,000*l.* capital, for working certain mines, such capital to be raised in England. The Union Gold Company (an American scheme), has been remarked upon as a case in point, and such ended in loss—so is it assumed all foreign speculations must do the same—as it is said, if the "thing" be aught as it is represented, the French or the Americans, or be they who they may, would not allow foreigners to advantage. If we come nearer home, we would ask our contemporary, how is it that London adventurers, who never saw the counties of Cornwall and Devon in their lives, and who have no connection therewith, are permitted by our friends in the west, whose motto at all times, be it remembered, is "One and All," to hold an interest in Wheal Maria, Carn Brea, Consols, United Mines, Tresavean, or others, from whence hundreds of thousands of pounds have been divided among the *out* (or foreign) adventurers? However, the point or argument—call it what you will—is worth just so much as common sense will give it credit for. We now arrive at a point in which we can most fairly and fully agree with our contemporary, who observes with much force—and we can, for ourselves, say, with much truth—"Our business is to depreciate to the utmost of our power any attempt to abstract from this country, to encourage foreign labour, when the same results can be produced at home."

We believe that it will be acknowledged at all hands, that we are not advocates for money being sent to foreign climes. We have ever shown ourselves the friend of the home miner—we have ever advocated his interests. We have offered every opposition in our power to the free-trade system, as regards the import of ores, with the consciousness that in so doing we were upholding the mining interest at home: but, if the representations made in the prospectus before us be correct, and that "the same results" cannot "be produced at home"—we mean so far as a return for capital employed—we have no hesitation in putting forward a scheme which may bring to the English capitalist, not only a large return, but at the same time that, in its application, it will be the means of aiding our collieries in South Wales, from whence, it would appear, the company calculate on obtaining their supply of fuel.

Referring to the preceding remarks, which have suggested themselves, as to the intended operations of the company, we may, to adopt the words of the prospectus, observe—"that the estimates are based on the exclusive use of anthracite coal" from Wales, freights being found both "reasonable and abundant." From the estimate of the engineers, we find that the one calculates on 1¼ ton anthracite, which, including duty, freight, &c., he sets down at 1*l.* 16*s.* 6*d.* per ton; while the other assumes much the same figure—each of these gentlemen take 2½ tons of ironstone, and we presume such estimate to be correct, more particularly when we have the assurance that such is beyond the actual quantity used at the present moment in the manufacture of iron. We confess that we were sceptical in the first instance, and nothing but the confident assurance of the parties, and the production of the weekly returns, showing 2⅛ tons of iron ore (which is, we understand, the brown hematite), would have satisfied us—the other figures are easily checked.

On reference to the prospectus itself, it will be found that the estimates above referred to were made antecedent to the erection of the present works, which have been sometime in operation, and thus tested their correctness. We next find that, instead of the cost which we have above cited, of 107 fr. 50 cents. to 113 fr. 80 cents. per ton of pig iron, such can be manufactured at 90 fr. per ton—while for the current prices of pig or bar-iron, as we have before observed, we must again needs refer to the Prices Current. The estimate upon the increase of the works is given in the advertisement, which renders any further remark on this point unnecessary; while we can only say that, if the figures be correctly given, no doubt can be entertained of the beneficial results attendant upon an increased application of capital, calculated as such is to be, equally beneficial to the present holders, as to those who may be disposed to embark in the scheme under notice.

PROGRESS OF FRENCH MINING INDUSTRY.

[FROM OUR PARIS CORRESPONDENT.]

M. Leon Faucher's attack on the iron monopoly, noticed in preceding letters, has called forth a great number of fierce communications from the ironmasters, in which they insist on their ability to meet the orders that are offered them, and on the "national" importance of keeping up their monopoly. These epistles have furnished M. Faucher with a text for several rather long lucubrations in the *Siecle*,—and I propose to lay the substance of these lucubrations before you, although in truth they contain little that has not been insisted upon again and again in your Parisian correspondence.

M. Faucher, it will be remembered, stated that, in only two establishments in France, are the *bandages à rebords*, required in railway carriages manufactured,—and that those two establishments lately refused to receive orders for such articles. It is now alleged by the ironmasters, that the *bandages* are made at the establishments of Montataire, Abainville, Alais, and Rive de Gier, as well as at Hayange and Fourchambault. To this M. Faucher replies that, if the establishments in question do manufacture those articles, the merit of them is so little known, that no great railway company ever thought of applying to them. The manager of the Fourchambault establishment, it appears, asserts moreover, in a general way, that the manufacture of bandages is sufficiently extensive to supply all the demands. To this, M. Faucher replies, that he has in his possession letters from the establishments which generally manufacture this description of articles, positively refusing to accept new engagements. He says also that, in a letter of the 8th Sept. last, the manager of Fourchambault wrote, that he *now* manufactured the article, but that "his fabrication was so engaged for a long time" that he could not receive orders. M. L. Faucher having insisted that the bandages of Low Moor were greatly superior to those of France, the manager of Fourchambault states that those of his establishment are in no wise inferior. To this M. Faucher's reply is, that experience has not proved the equal excellence of the bandages now manufactured at Fourchambault with the bandages of Low Moor, of which they are imitations; and that, although Fourchambault has for the last 10 years pretended to be equal to Low Moor, it has turned out nothing that has not been inferior even to the bandages of Hayange, saying nothing of Low Moor. M. Faucher adds, that having caused experiments to be made, he found that the bandages of locomotives of Fourchambault supported a traffic of 15,000 kils.; those of Hayange, 26,000; those of Low Moor, 53,000. On the Strasburg and Bale Railway, the experiments were somewhat more favourable to the Hayange bandages, but even then those of Low Moor were as two to one superior: and, adds M. Faucher, what settles the question is, that the railway companies all prefer the *dearer* bandages of Low Moor to those of the French establishments. According to the manager of Fourchambault, the price of the Low Moor bandages is 68 fr., the 100 kils.; of French bandages, 70 fr.; and, he asks, what prejudice this trifling difference can cause to railway companies? M. Faucher answers the question, by asking another, and that is—what need the French ironmasters have of protection, when they profess to be able to manufacture and to sell at the same price as at Low Moor? He, however, remarks, that if, as stated, the bandages of carriages cost only 68 fr. in England, those of locomotives cost 95 francs; and he demands, if it is not unjust and monstrous to put an impost of 20 fr. 60 cents. upon such articles, which are only taken in England on account of their incontestable superiority, and on account of the superior protection they afford to the public.

M. Faucher next refers to another letter from the manager of Montataire, denying that he intended to shuffle out of the order for the supply of the *tôles* required for the American Steam Navigation Company. He shows that, though the company wrote to the manager to say the quantity and the exact size of the *tôles* they required, the latter, instead of saying whether he could supply them or not, wrote back to ask the quantity and size required. This, says M. Faucher, was not acting seriously, and fully warranted the company in believing that Montataire could not supply its demands. In the manager's letter, by-the-bye, it is positively stated, that the weight of the heaviest sheets could not exceed 200 kilogrammes, and that the size—4¾ metres long, by 50 to 70 centimetres, with a thickness of 17 millimetres—was *perfectly inexecutable*, adding a belief that such dimensions had never been attained, even in England. Your readers will, probably, be able to give a denial to this. Touching the price of *tôles*, M. Faucher says he calculated it at 65 fr. the 100 kilogrammes in France; and that Messrs. Mertian and Schneider say, that it is only 56 fr. and 54 fr. 70 cents. But Mr. Faucher insists that, to obtain *tôles* of as good a quality as the *best best* of England, they must be paid 60 fr. to 65 fr., which is double the English price; and that, even at the price named by M. Mertian, they would be 75 per cent. dearer than in England. This, it is well remarked, is enough to crush the branches of industry in which *tôles* form the first matter; and that is far too much, considering that the *prix de revient* for the ironmasters does not exceed 30 fr. to 32 fr. To preserve, then, for themselves, by means of prohibitive duties, a profit of 75 to 100 per cent., is, says M. Faucher, what the ironmasters call protection to national industry! In a second letter, M. Faucher states more important facts; but I must reserve them for next week.

M. le Comte de Castellane, after many expensive researches for coal, in the Pyrenees, has succeeded in discovering a bed of lignite in the commune of Orignac, arrondissement of Bagneres. It is about three metres in thickness, and is believed to be very extensive. M. de Castellane has obtained possession of great part of the surface of the soil occupied by the bed, and has applied to the Government for permission to work it.

A St. Dizier letter, of the 9th, says that *fers battus à la houille* were 395 fr. to 400 fr.; *laminés*, of the first class, 400 fr.; *fontes blanches*, 190 fr.; *fontes grises en sapots*, 205 fr. to 210 fr.; and *fils de fer*, 6 fr. to 6½ fr.

Sometime ago I noticed the opening of a subscription in the department of the Seine Inferieure, for making researches after coal, which is believed to exist. The amount named, as necessary for the commencement of the soundings, is now nearly realised, and, as soon as it shall be so entirely, operations will be commenced. In the event of a mine being discovered, the subscribers alone will be entitled to shares in the company to be formed for working it.

On the 14th inst. will be held in Paris a meeting of the Coal Mines and Railway Company d'Epinac. The Companie de l'Antonius et des Mines Reunies will meet at Paris on the 25th inst.

The Vieille Montagne Company advertises to its shareholders that a compay has been formed in Belgium, under the sanction of its directors called the Société de Houillère et Fonderies de Zinc de Valentine-Coq, with a capital of 1,200,000 fr., in 2400 shares, and that 1400 of the said shares are retained for the shareholders in the Vieille Montagne, and will be delivered to them in the proportion of one Valentine-Coq share for every four Vieille Montagne, on application up to 10th February next, at the company's offices at Angleur, in Belgium, or Rue Richer, 12, Paris. The name of the new company sets forth its objects sufficiently to render explanation unnecessary.—*Paris, Tuesday.*

GENERAL MINING COMPANY FOR IRELAND.—We are happy to learn, that this company is progressing steadily and profitably, both at Shallee Lead and Lackamore Copper Mines, under their intelligent agent, Matthew Curry, a Cornishman. Their first shipment of copper ore was sold on the 14th Oct. last, at Swansea, part of which brought as high a price as 18*l.* 5*s.* per ton. We understand they will have 40 tons more for shipment next month, with 44 tons of silver-lead ore now in transit for market, and as much more in course of dressing for shipment. This promises well for a young company, which only commenced operations on their deposits in May last, now affording good wages and constant employment to upwards of 200 people in the wildest part of the mountains of Tipperary; and we are glad to have an opportunity of recording, on reports from the best authority, our testimony of the industry and perseverance of the miners in these hard times, their general good conduct, their strict adherence to sober and industrious habits, and their uniform attention to, and respect for, their agents.

SUBSTITUTE FOR COAL.—In consequence of the great price of coal in Egypt, Mr. Shepherd, C.E., who has travelled in that country, informs us, that an English engineer has tried the refuse, or cotton seed, that has hitherto been thrown into the Nile, which, on account of the oil contained in the seed, or refuse, is found to be an excellent substitute for coal, and is now used instead of coal for the pacha's land steam-engines.

EXPORTATION OF THE PRECIOUS METALS.—The following are the official returns of the exports of gold and silver from the port of London for the last week:—

Silver bars to Rotterdam ..... 4419 ounces.
Silver specie to Sydney £18

Original Correspondence.

MINING OPERATIONS IN WALES.

Sir,—The growing importance of the South Wales coal basin, in a commercial point of view, the rapid extraction of the upper seams, and the consequent working of the lower measures, prompt me, upon the score of humanity, to address you upon this momentous question. I purpose to take a short, and necessarily limited, view of mining operations in the western part of the principality, of the extraction of coal, and of the amount of scientific knowledge brought to bear upon those operations generally; and I will offer such suggestions for their improvement, where defective, as may present themselves, in the hope that the coal owner, the coal proprietor, the philanthropist, and the philosopher, may conjointly be brought to act together in the cause of suffering humanity.

In the outset, Mr. Editor, I disclaim anything and everything in the shape of personality or prejudice. My avocation, that of a surveyor and agent, has brought me into close contact with the owners and managers of mines; I have had free access, in my professional vocation, to the underground workings, and to the colliery plans; and it is only with the hope of turning the attention of parties interested, and a wish to benefit the working miner, that I now address you, upon what I consider to be, and which I shall endeavour to show, is a question of paramount importance.

It is universally admitted, by all parties conversant with the South Wales formation, that all the veins of coal lying deeper than the Mynyddyswllyn and the Cwm Tilery, are highly charged with carburetted hydrogen; and I speak advisedly, when I say, that South Wales will undoubtedly become a huge charnel-house, before which Northumberland and Durham shall sink into insignificance; and it is only by a close and strict attention to the laws and practise of pneumatics, coupled with an improved method of working, that the evil can be remedied, or its mighty progress stayed.

The alterations and changes which I shall propose, in order to place the working of the South Wales coal-field in an effective and good position, shall be such, that they shall be attended in a pecuniary point of view with the most beneficial effects—viz.: firstly, that a greater quantity of coal shall be got from a given area; secondly, that it shall be got with less labour; and, thirdly, that, when got, it shall be a better and more marketable article; and it is upon these grounds that I claim the candid attention of coal masters, coal proprietors, and coal agents, and, if I succeed in satisfactorily proving the truth of these positions, I have no doubt but I shall obtain their co-operation in carrying out the views proposed in this and the following letters. It would be imprudent, unwise, and unjust, were I to instance any particular colliery or collieries, whose operations might be open to censure. My object is not to attack men, but measures; and, for the same reason, it would be unwise were I to name collieries, which, in some respects, are not liable to the charges contained in this letter: there are a few such, but, I am sorry to say, that they form rare exceptions to the general rule. Previous, however, to entering upon a consideration of this important question in detail, a short glance at the general characteristics of the South Wales basin, will, to your non-professional readers, be most probably acceptable, as it will assist them in forming an opinion upon the facts adduced for their consideration. The value of this immense formation of coal, has only of late years been duly appreciated: great and rapid progress has, however, been made in its development; and the annual produce of coal, at the present time, is, in all probability, little, if any inferior, to that of the Northumberland and Durham coal-fields.

The eastern part of the South Wales coal-field—and this term is generally made to include a great portion of Monmouthshire—is divided by several great faults, or lines of elevation or depression, as the case may be, running nearly east and west. It is not my intention at present to notice any faults or dislocations of the strata, except those that have operated to produce great physical changes in the state and condition of this coal-field; it must not be presumed from this, that the lesser faults are unworthy of notice, and that they have not performed, and do still, and will continue to perform, great and beneficial service—these are local, and require a local consideration; the others are general, and, from their extent and effects, press themselves upon our notice. The first fault of importance commences near Aberavon, running to a few miles north of Caerphilly; this fault, proceeding from the southerly edge towards the northerly edge of the basin, is a downcast of nearly 50 yards, and throws sufficient cover for the upper seams, previously mentioned, and which have not been found in the basin to the south of this fault. Proceeding from this fault inwards, in a northerly direction, we meet with another great fault—an upcast, to the north of 65 yards, or thereabouts, traversing the field in a nearly parallel direction with the one already mentioned; in no instance is there a finer geological lesson, nor a more beautiful view of the utility of faults, than a consideration of the one before us. Viewing it from the south in the direction we are supposed to be travelling, it raises the upper beds, and, consequently, the whole formation (65 yards) nearer the surface, and prevents them (and especially the Mynyddyswllyn and Cwm Tilery) from dipping under the hills, as they would do from the mountainous state of the country to a great depth. Viewing it from the north, in which case it becomes a down-cast, we find that, were it not for this fault, the upper bed—the Mynyddyswllyn, by far the most valuable of the two—would have cropped out to the surface in a very little space; and the vast area of coal, lying betwixt this fault and the one first mentioned, so far as this vein is concerned, would have been lost—lost for want of cover; but, as it is, the Mynyddyswllyn vein is found betwixt these faults, alike in hill and dale; and it is, consequently, worked by shafts, differing in depth, according to the situation, but, in general, about 60 yards—the same coal on the north of the same fault, being so near the surface as to be accessible by the level or natural drainage. This fault is easily traced upon the surface of the ground from Ebbw Vale, through Blackwood, over Gelly Gaer Mountain, and through the Valley of Llanvanbon.

As stated in the preceding sentence, the crop or outburst of the Mynyddyswllyn vein, on the north of the 65 yards' fault, meets the surface in the various valleys, dingles, or dells, with which this portion of South Wales is intersected; and, in like manner, dipping into the hill on the opposite side of the valley. These natural advantages (or rather disadvantages—as, by the formation of these valleys, a considerable portion of the Mynyddyswllyn vein has been swept away, and is irrecoverably lost) have powerfully conduced to bring about the present state of things, and to foster a disregard of the principles and practice of pneumatics. The Mynyddyswllyn vein, near Gelly Gaer, is about 5 ft. 6 in. thick; but owing to a clod, bing or parting, as it is variously termed, which commences near the latter place, and which does not there exceed a few inches in thickness; thickening as it proceed easterly, it becomes at Blackwood a stratum of the thickness of 12 yards, and where the coal consequently forms two veins. This is a most singular phenomenon, and one rarely met with.

The lower seams of coal are at present only worked upon the outcrop, or bassit, of the formation—for instance, Risca Colliery, Blaenavon, Nanty-glo, Tredegar, Rhymney, and Merthyr Iron-Works, clearly indicate the edge of the carboniferous formation in the districts, which they severally bound; and these lower seams, although so near the surface, and, in some instances, worked by level, are more or less highly charged with carburetted hydrogen; and if this gas is met at such inconsiderable depths, what may it not reasonably expect it to be in the inland parts of the basin, with a cover of 600 or 800 yards? If it is sufficiently powerful, under the present circumstances, to send its victims by scores into eternity, what will be its effects, when the same seams are worked at the profound depths here mentioned? The time is not far distant, when the two upper seams, the Mynyddyswllyn and the Cwm Tilery, from which the markets of Newport and Cardiff are supplied, will be wholly worked out, a careful consideration of the extent of coal unworked, and the demands upon it, will not guarantee a much longer time than 20 years; and, long before that time, a great number of collieries, now in active work, will have exhausted their upper seams, and will be compelled, either to relinquish the trade, or to avail themselves of the lower deposits.

It is most lamentable, for one moment, to think of the mass of suffering, mental and physical, which appears in prospective; and which will at no very distant day, fill this delightful country with dismay and desolation. I hope, Sir, in an early letter, to return to the subject. F. B.

November 10.

BUDD'S IMPROVEMENTS IN THE MANUFACTURE OF IRON.

Sir,—In looking over your valuable paper for the last week, I find that a patent has been taken out by Mr. Budd, of the Ystalyfera Iron-Works, to manufacture iron from the clinkers produced by the combustion of coal. I am sure Mr. Budd cannot be aware that, for the last eight years, the iron-works in Merthyr use the whole of the clinkers made in the blast-furnace.—A Workman: *Nov.* 10.

THE "GUN COTTON."

Sir,—The phenomena of the "gun cotton," I confess, puzzles me. The temperature at which it explodes, according to Schönbein, is 400° Fahr.; it will vary materially, according to circumstances—for instance, its mode of preparation, its entire dryness, or its hygrometric humidity. Mr. Horsley (an intelligent chemist) proposed the following plan, which we repeated together:—The tin case surrounding the ball of a thermometer attached to a *metallic* scale (the graduated metallic plate being in contact with the bottom of the tinned case), was entirely filled with gun cotton, and the flame of the spirit lamp applied below; when it exploded, the point to which the mercury had risen was noted, and proved to be 78°; I subsequently repeated the experiment several times. Both of us thought it *conclusive* at the time; but we have, on more mature consideration and reflection, considered it *equivocal*; because the impulsion of the apex of the flame below, to a particular point on the metallic base, might communicate to the "gun cotton" a *sudden* high temperature, which would not tell on the thermometer. I proposed another plan—the flame of the spirit lamp was applied below a metallic plate, and the thermometer was insulated by a plate of cork, while a bunch of copper leaf was wrapped round the ball of the instrument, and rested on the metallic disc. On this copper foil the "gun cotton" was placed; the thermometer rose gradually and slowly, and exceeded 130°, when I was called away from the experiment: the "gun cotton" had not exploded at that temperature, but this temperature throughout was very unequal and unsteady, from currents of air, and the *graduated and slow* rise of temperature, it now occurs to me, would have rendered this experiment at best problematical, from a partial modification or *decomposition* of the material! I have since caused copper leaf to float on *boiling water* (212° Fahr.), and dropped the "gun cotton" on the foil; but it did not then explode. It became promptly saturated with moisture, and its combustion was not instantaneous, and only partial on applying a lighted taper. The question must, therefore, be left *sub judice* at present. The "gun cotton," with which I have made my various experiments, was prepared by Mr. Horsley. With only *twenty grains*, a pheasant was killed at the distance of 70 yards! The bursting of the gun, when charged with 58 grains of "gun cotton," in the hands of Mr. Lancaster, proves that it is a material not to be trifled with. It seems to be more applicable to blasting the rock than to the fowling-piece; indeed, it fouls the gun barrel *much more* than gunpowder—an important fact.

I have several times put a quantity of gunpowder in the palm of my hand, with gun cotton in contact, and fired the latter, while the former remains unignited! It is, indeed, a very curious substance: the flash is silent. Nothing in the form of visible vapour accompanies its combustion, and it vanishes into "air, thin air," leaving "not a wreck behind." A very peculiar, and not unpleasant, odour attaches to the spot where it is ignited, and a polished mirror is scarcely dimmed, and there is a very slight deposition of moisture, of an *acid* character. Examined through the Stanhope-lens, the gun cotton presents a mass of wiry semi-translucent fibres; and, from the phenomena presented by polarised light, are *perhaps* furred with microscopic crystalline plates.—J. Murray: *Portland-place, Hull, Nov.* 12.

THE "GUN COTTON."

Sir,—In the last Number of your interesting Journal, I observed two paragraphs, relative to the explosive gun cotton. The process adopted in the manufacture of that which was brought forward, at the meeting of the British Association, at Southampton, by my learned friend, Mr. Grove, has not yet been communicated to the public—the period of specification not being expired; and I am induced to suppose that the mode of preparation adopted by the German patentee is different from the method already communicated to the public. I am informed that the specimen introduced at that meeting has no explosive report and no recoil, but resembles the air-gun. In the discharge of a gun with powder, as usual, an aerial vacuum is produced, and the immediate subsequent rushing in of atmospheric air into the barrel, both by the muzzle and touch-hole, causes the report. In the air-gun no aerial exhaustion can take place. In the preparations that we have had made here, two processes have been adopted. When fine cotton is well wetted, in equal quantities by measure of concentrated nitric and sulphuric acids, and, subsequently, forcibly pressed between two pieces of thick plate glass, and afterwards well washed in four or five different portions of water, the mass is dried gently in a moderately-heated oven; the whole process occupies about two hours. After these processes, when weighed, an increase of $\frac{1}{20}$ in its weight has taken place—viz.: 20 grains of cotton after the process weighs 39 grains.

The cotton, in its natural state, when examined by a powerful microscope—in this case I employed one of the Achromatic lens, of a power of 300, or equal to 90,000 in surface—the same arrangement in structure a observable in the hair of the head, and in most fibrillated substances—no tubular appearance; after the process, no change in microscopic character. Two-and-a-half grains of this cotton, introduced into a rifled-barrelled pistol, and loaded with a bullet, when discharged, the bullet penetrated into a piece of wood as far as 26 grains of gunpowder subsequently effected; the first report was considered to be greater than what the percussion cap might produce. Every subsequent discharge—that is, report—appeared to increase, till after four discharges; when a dampness was observed in the barrel of the pistol, and prevented any further discharges until well dried. The vapour producing this dampness being considered to have been occasioned by that portion of water, which is always a constituent part of sulphuric acid, however concentrated, some cotton was subsequently prepared by nitric acid alone and with this no dampness ensued—an evident difference in expansive result.

The expansive power of any exploding ingredient is in proportion to the sudden space occupied by the gaseous product. We are not acquainted with any compound that is convertible, in proportion to its weight, by explosions, as to occupy the same space as gunpowder, provided every grain could be exploded at the same instant of time—this is impracticable. The experiments of Count Rumford satisfactorily demonstrated, that the greater portions of a charge of powder passes out of the cannon or gun unexploded; and hence the reason why a cannon becomes heated by frequent discharges, a less charge of powder becomes necessary. With respect to prepared cotton, similar to many fulminating compositions, the whole mass becomes gaseous in one and the same instant of time; the earthy matter in cotton does not exceed 1 per cent. of the weight of the cotton. There appears some error in the statement as to the temperature required for explosion. One gentleman, I observe, says the effect will be produced by any warmth exceeding 78° of Fah.

I have made experiments with excelent cotton carefully prepared, and I have never produced an explosion at any heat below 300°; and, therefore, no danger in sending by letter any specimen to a friend, although it may be prudent not to send by such a mode of conveyance any quantity capable of producing destructive effects.

There is no doubt, that in mining processes it will be found superior to gunpowder, I apprehend it will not supersede the use of that article in military affairs. These observations cannot apply to the late patented article, as the manufacturing mode will not be known for some months. As an article of economy, it is not probable that it will be adopted instead of gunpowder, even if we estimate that 1 lb. of cotton will produce nearly 2 lbs. of the compound; yet that addition is principally at the expense of the nitric acid, and hence I presume that, weight for weight, it can never be manufactured on the same terms as gunpowder. I purpose analysing the prepared material, and, if the results should be interesting, I shall have pleasure in transmitting the particulars to you. C. H. Wilkinson.

Bath, Nov. 10.

INCRUSTATION IN STEAM-BOILERS.

Sir,—In your Journal of 31st Oct., I have just observed a letter, which had previously escaped my attention, signed "J. Murray" (Hull), in which observations are made upon Dr. Ritterbrandt's patent process; and, as these observations are calculated to mislead those unacquainted with chemistry, I beg the favour of a place for a few comments upon them. Had Mr. Murray examined Dr. Ritterbrandt's specification, he would have found that, while acetate, nitrate, and muriate of ammonia are distinctly specified, no mention is made of the sulphate; so much, then, for the use of sulphate of ammonia. Mr. Murray suggests a remedy for sulphate of lime, which must excite the ridicule of every tyro in chemistry, when he talks of the decomposition of sulphate of lime by *nitrate of soda*. The soluble salts, which he says result from this decomposition, cannot exist together, as such is known to every druggist's apprentice. Mr. Murray is equally at fault, when he says, that the carbonate of ammonia would interfere with the brass work: under favourable circumstances, ammonia will, doubtless, act upon copper; but, in the case quoted, there will be eliminated only five or six grains of carb. ammon. from each gallon of water evaporated; this ammonia is accompanied by excess of carbonic acid, and passes rapidly over the surface of the slide, and diluted with many thousand times its volume of steam: under such circumstances, appreciable chemical action is impossible. I must apologise for the space occupied with the refutation of these absurdities; but inserted, as they are, in your Journal, they obtain an importance which they would not otherwise possess, and may thus prejudice, in the estimation of non-chemical readers, a patent which, I believe, from careful observation, is capable of effecting great services to the steam-engine.—A. Gillot, Surgeon: *Haymarket, Nov.* 12.

THE TRUCK SYSTEM—"CASE" AND "OPINION."

Sir,—I, jointly with another gentleman, carry on a small lead mine, amongst which are small particles of copper, in a very remote part of the country, about 10 miles from this town,—and, owing to its distance from either town or village, we have been induced to supply the workmen with goods, by erecting two shops. I supply them one month, and my partner the other; and when we settle with them for work done, we have been in the habit of deducting the amount due to us for goods, and handing over to them the balance. Now, we wish to know, if we are any ways liable to have the Truck Act enforced upon us, as we are now threatened? Are you aware of any circumstance where such has happened, with regard to lead and copper mines? My son, a solicitor in London, has obtained me counsel's opinion—a copy of which I have taken the liberty of inclosing, which, you will find, states we are not liable; but my other son, who is of the same profession, residing in Carmarthenshire, tells me we are liable. I should feel greatly obliged by your informing me, whether we are, or not; and, if so, which will be our best mode of carrying on the same, so as to avoid the force of such Act. H. W.

Machynlleth, North Wales, Nov. 10.

COUNSEL'S OPINION.

The plea of set off clearly cannot be supported, nor cannot be improved, by any amendment. Each partner sold goods on his own separate account; and if an action were necessary to recover the price of such goods, the individual partner who sold them must have sued for them separately. The price, therefore, cannot be set off against a debt due from the two jointly. Still, it is very possible that the plea of payment may be supported; for, if the goods were taken by the plaintiff originally in payment for his wages—or, if the plaintiff, in the first instance, bought the goods, and, by a subsequent arrangement with the partner who sold them, the price was set off against the wages, with the intention that such setting off should operate as a discharge of the price of the goods on the one side, and of an equal amount of wages on the other—this, I think, in law, is equivalent to payment.—*See* Austin *v.* Austin, 12 Mod., 538; Waller *v.* Andrews, 3 M. and W., 318; Gibson *v.* Winter, 5 B. and Ad., 96; and I think it unnecessary to say, that one only of the defendants made the payment, because the payment was made on the partnership account, and the partner making it was forthwith entitled to credit for the amount in the partnership account, as having introduced so much capital. The defendants must prove, if possible, that, at the end of each of the months covered by the particulars, the amount of wages and shop goods was agreed to by the plaintiff, and the balance paid to him. If this cannot be fully proved for all the months, it should be proved for as many as possible, so as to show that such was the course of dealing; and proof of the later settlements will be very valuable, because they will operate as admissions that previous demands had been settled. Evidence may also be given by other workmen generally. If the last one, two, or more, settlements with plaintiff cannot be proved in any way, the plaintiff will recover a verdict *pro tanto*. But admissions made subsequent to the date of the last settlement, to the effect, that nothing was due, or that all the wages had been paid, will be very desirable, and will be proof of the last settlement. The defendant's shopman should be ready to prove the supply of the goods; and the overlooker, probably, will be a useful witness, to prove the practice, and to prevent plaintiff from claiming for more work than he really performed. The Truck Act, 1 and 2 Wm. IV., c. 37, does not apply to a person who merely labours in a lead mine for the getting of lead ore, which I understand to have been plaintiff's position. I think that it would not be necessary to reply the Truck Act to a plea of payment.

[There can be no doubt, but that our correspondent's arrangements come within the meaning of the Truck Act, and are liable to be indicted as such: we have, however, appended the "counsel's opinion," as the subject is one of importance, and it may prove of interest to many of our readers. We are not among those who sweepingly condemn the Truck system, as being everything that is baneful and pernicious—on the contrary, we can imagine that much convenience and accommodation may be derived by the men and their families from the existence of shops, conducted as our correspondent represents; it is the *abuse of the system* that should be cured—place their management in the hands of known honest men, or retain and exercise sufficient control over them, to prevent the intrusion of mal-practice, and the existence of truck shops in remote districts, and under such circumstances as above mentioned, would be hailed with satisfaction, instead of condemnation, by the working miner.]

VELOCITY OF AIR ENTERING STEAM-ENGINE BOILERS.

Sir,—In reply to "A. B.'s" inquiry, in your last Journal, respecting an instrument for measuring the quantity of air supplied to the fire of a steam-engine boiler, I venture to say, that my anemometer would answer that purpose with considerable accuracy. For this purpose, I would confine the admission of air under the fire bars to an area of 2, 3, or 4 square feet, in which opening I should fix the instrument. The velocity of the air per minute, indicated by the instrument, multiplied by the area of the opening, would show the number of cubic feet passing through the opening during that time.—B. Biram: *Wentworth, Nov.* 9.

Silver Ore—Port of London.—Seventy-five tons of rich silver-lead ore arrived in the River Thames this week, consigned to the smelting firm of Mullins Brothers & Co., Battersea, from the Laxey Mines, Isle of Man.

A letter from the Hague informs us, that the Dutch Government, in consequence of some recent reports from engineers, is about to send out miners to work the gold mines which it possesses on the coast of Guinea.

Discovery of Roman Cement in Scotland.—Newfield, in the parish of Blantyre, Lanarkshire, consists of about 30 imperial acres; it marches with the western boundary of the parish of Hamilton on the east, the lands of Calderside on the west, the lands of Mr. Jackson, of Park, &c., on the north, and with the lands of Lord Blantyre on the south. The southern extremity is at the summit of an elevation, or gradual rise, which commences about the south side of the village of High Blantyre, and proceeds southward for about a mile, and then affords a most splendid panoramic view of the Vale of the Clyde, and as far north as the Grampians and the Ochills. The exposure of the lands is to the north, and from the south-west corner of them there is a declension towards the north, which becomes sudden and considerable; and, farther down, extends also to the east and north-east, though not so deeply nor suddenly. These lands were minutely surveyed and examined by the celebrated mineral surveyor, Mr. Wm. M'Creath, Drumpark, by Coatbridge, who, in his report of 3d Jan., 1845, now shown, certifies that the grounds contain—1, *Roman cement*, in thickness, 1 *foot* 1 *inch*; 2, limestone, No. 1, 1 *f.* 2 *i.*; 3, ditto, No. 2, 2 *f.*; 4, ditto, No. 3, 4 *f.* 6 *i.*; 5, clay ironstone (dark), No. 1, 9 *i.*; 6, clay ironstone (dark), No. 2, 9 *i.*; 7, blaes, with ironstone balls, 2 *f.*; 8, clay ironstone (dark), No. 3, 11 *i.* There is also produced an appendix to the report, showing that the lordship to be obtained for the said minerals, if wrought as recommended, might yield an annual return of 399*l.* 12*s.* 4*d.* Since then the lands have been opened, and limestone found at a depth of about 6 to 7 feet under the surface—it has been wrought open cast; it is 6 ft. in thickness, and the following is the analysis of it, ascertained and certified by John Tennent, Esq., of St. Rollox:—Carbonate of lime, 91·8; iron, 3·0; insoluble matter, 3·8; water, 1·4 = 100·0. At a depth of about 30 feet under the surface of the high part of the grounds, Roman cement of 13 to 14 in. in thickness was found, on examining which Mr. Tennent's analysis of it is thus—Insoluble matter, 14·0; iron, 17·5; lime, 52·58; sulphur, 25·9; loss, ·02 = 100·00. Mr. M'Creath's report has been confirmed by the verbal declarations of Mr. Hunter, who has long wrought the minerals of the Calderwood and Crossbasket estates, to the west of Newfield, and by Mr. M'Lintock, the Arden lime and Roman cement merchant, both of whom assert not only that the Newfield lime and Roman cement are of the richest quality, especially for building and agricultural purposes; but they add, that in the lands there are to be found—freestone of the best quality and fit for making millstones and the like, and coal below the ironstone strata. By means of the railway from Hamilton, by Blantyre, &c., to Glasgow, these, and the valuable minerals in the lands of Calderwood, Calderside, Crossbasket, Park, &c., and in the immediate neighbourhood, will now be made available to the Glasgow market, and will well reward any enterprising company raising them. Newfield is the property of George Salmond, Esq., procurator-fiscal, Glasgow.

M. Payerne had lately sent his diving apparatus to Brest, to attempt the raising of the guns of the *Républicain* man-of-war, which went down in that harbour about fifty years back. M. Payerne's vessel was in the act of being towed along by the *Union* schooner, when a strong gale arose, and drove both vessels on the shallows of the Isle of Lihou, where they lie much damaged.

Stavbley Works.—These extensive iron works are now lighted with gas made on the premises; a number of retorts having been heated for the first time on Thursday last.—*Derby Reporter.*

IMPROVEMENTS IN THE MANUFACTURE OF CAST-STEEL.

[Specification of patent granted to Josiah Marshall Heath, of Winchester-buildings, in the city of London, for improvements in the manufacture of cast-steel.]—*Newton's Journal.*

According to the present invention, the pig-iron to be converted into steel may be melted in a cupola, or in a reverberatory furnace, as it may be run direct from a blast-furnace, used for smelting iron ore; but the most suitable apparatus the patentee considers to be a common cupola furnace, blown with hot air, in order that the metal, when run out from it, may retain the highest possible temperature.

The fluid pig-iron should be run from the cupola, or other furnace, into a receptacle made of any material capable of withstanding an intense heat, and similar in form to a common refinery, or to the shallow well of a reverberatory furnace, used for melting pig-iron; and the quantity of fluid pig-iron used for one operation should occupy about one third, or thereabouts, of the capacity of the receptacle.

The interior of this receptacle, and its contents, should be kept at the highest temperature that can be produced; a ready and convenient method of producing this high temperature is by employing currents of ignited carbonic oxide gas, conveyed through pipes, placed round the top of the receptacle, and slightly inclined downwards, so as to bear upon the surface of the fluid metal. A sufficient temperature, for this purpose, may also be procured by a current of oxy-hydrogen gas, produced by directing a stream of atmospheric air into a current of hydrogen gas, formed from the decomposition of water, which is allowed to trickle upon malleable iron brought to a high heat.

In order to burn the carbonic oxide, it is necessary to introduce along with it a current of hot atmospheric air; or, if a more intense heat is required, a current of oxygen gas may be introduced along with the carbonic oxide gas: in either case, however, care must be taken that the proportion of atmospheric air, or of oxygen gas, does not exceed that which is required to convert the carbonic oxide into carbonic acid, as any excess of oxygen in the blast would have a most injurious effect upon the melted metal in the receptacle.

The carbonic oxide may be obtained from the waste gas, of the cupola employed to melt the pig-iron, or from a blast-furnace, or it may be generated in a separate apparatus, by the imperfect combustion of any fuel; and the application of it may be in any of the numerous and well-known methods already in use. The proportion of hot atmospheric air, or of oxygen gas, necessary to form carbonic acid, may be exactly regulated by means of stop-cocks or valves in the pipes by which the hot air or oxygen gas is conveyed into the streams of carbonic oxide.

In order to decarburate the fluid iron in the receptacle to the degree to form steel, a certain portion of malleable iron, more or less, according to the quality of the steel required, is mixed therewith; for cast-steel of a medium degree of hardness, such as is used for general purposes, about equal proportions of pig and malleable iron will be found to answer best.

The proportions in which the pig and malleable iron should be mixed, however, will much depend upon the quality of the former. If grey pig-iron is used, it will require more malleable iron to be mixed with it than if white pig iron is used; this is a point, the exact determination of which can only be arrived at by testing the quality of the mixed fluid metal in the receptacle, at intervals, by taking out small samples in a metal ladle, and judging of the quality by the fracture when cold.

The malleable iron to be mixed with the fluid pig-iron in the receptacle may be in scraps, or in any convenient form; but by far the most economical, convenient, and pure state, in which the malleable iron can be used, is the granular form, produced by reducing any perfectly pure oxide of iron to small fragments, and then submitting them to the well-known process of cementation, in a common converting furnace, such as is used for converting bar iron into blistered steel. The iron ore, in small fragments, is mixed with just that proportion of carbonaceous matter which is sufficient to combine with its oxygen, at a red heat, in a close vessel; and when the process is finished, malleable iron is obtained in the purest possible state.

Before adding the malleable iron to the fluid pig-iron, the former must be brought to a white heat; and this may be done in a separate furnace; but the most convenient method is to place the malleable iron on a bed between the receptacle which holds the fluid pig-iron and the chimney up which the waste heat from the combustion of the gas passes. The malleable iron, when in a white heat, is raked into the receptacle containing the fluid pig-iron, and the whole is kept in fusion, and stirred about for a sufficient time to produce intimate mixture and uniformity of composition in the fluid mass; and when the assays taken from it show that the steel is of the desired quality, the contents of the receptacle are run off into moulds of any size or form required. A vitreous flux should be used to defend the surface of the fluid steel from the action of the atmospheric air while it is in the receptacle.

The furnace for effecting the object in view, may be varied in form; but, in the one preferred and described by the patentee, heated air is used, to preserve the metal while running from the cupola furnace at the highest possible temperature; it is of an oval form, having a channel running through its entire length, to convey the melted pig-iron from the cupola: the fluid pig-iron is thus allowed to run into the bed of this furnace, and malleable iron, at a white heat, is introduced through a door at the top, and intimately mixed with it by means of a wooden pole. To keep up an intense heat, some of the gases are used, which are rich in carbon and hydrogen; and the proportions to be used, without producing an oxidating flame, are regulated by a valve, or stop-cock, in the flue through which they pass. The gas preferred by the patentee is carbonic oxide, which may be collected from the top of the cupola or blast-furnace, and conveyed through tubes round the decarburating furnace, arranged for the purpose; these pipes, in communication with the reservoir for the collection of the gas employed, are placed in such a position, that the flame plays down upon the fluid metal, and keeps it in that state; while other tubes, in front of the furnace, convey the necessary quantum of atmospheric air for supplying the oxygen to be mixed with the gas, to keep it in a state of combustion: the air thus conveyed passes through pipes, which are kept in contact with the waste flame of the chimney, and thus mixed with the gas in a highly heated state. There is a tap hole in the bottom of the bed of the furnace, through which the fluid steel is run off into moulds, and a fresh supply of melting pig-iron is then allowed to run from the cupola furnace—malleable iron, at a white heat, again introduced, and the process repeated as before.

The claim of the patentee is for the decarburating pig-iron, mixed with malleable iron, to a sufficient extent to form steel, instead of adding carbon to wrought-iron, by means of imbedding it in charcoal, as has been hitherto the practice. It will be observed, that, by this practice, the metal may be run from the ore in the blast-furnace into the decarburating furnace, and not allowed to solidify until it leaves the latter in the shape of cast-steel—an operation which greatly simplifies the manufacture, and the product is obtained much more economically than by the usual method.

Joint Stock Companies—Parliamentary Paper.—A return to an order of the House of Commons, made up to the 1st of June, 1846, of the Joint Stock Companies, which have been registered in conformity with the provisions of 7 and 8 Vic., c. 110, comprises, under distinct heads, a list of existing, of provisionally registered, and of complete registered companies. The first is a return of companies registered, as having been in existence previous to Sept. 5, 1844. It merely gives the title and the date of the registration of these companies, of which there are 994. The second is a return of 1633 provisionally registered companies, the formation of which was begun subsequently to Sept 5, 1844. In 1112 of these there has been no registry of directors. The names of the directors of the remaining number form a subject of a separate branch of the return. In 863 out of the 1633 projects, no capital has been declared; and in the 770, in which there is a return of the amount of capital, it reaches the enormous figure of 634,127,550*l.*, of which 40,000,000*l.* was required for "Cooke's National Railway," and 35,000,000*l.* for the "British and Irish Granary Corn-mill Company and Provident Institution." The third part of the return contains a list of the companies, which have been completely registered since Sept., 1844. They number 115, and their joint capital (excepting one, the "New Protecting Society," which does not propose to raise any,) amounts to 29,774,220*l.* Of these 24 are gas, 16 railway, 14 insurance, 7 steam-packet, 7 building, 7 loan or investment, 6 mining, 5 glass, 3 mill, 3 cemetery, 2 coal, 2 salvage, 2 iron, 2 brewery, 2 market-house, 1 bonding-warehouse, 1 smelting, 1 tontine, 1 bath, 1 emigration, 1 cork-cutting, 1 screw-ship, 1 baking, 1 Decca sugar, 1 commercial, 1 railroad-carriage, and 1 oyster companies. The names of the directors of these several companies are set forth in a separate branch of the return.

Reward of Scientific Merit.—Mr. J. Marsh, the celebrated chymist, whose well-known test for the detection of arsenic is so extensively used in medical jurisprudence, died some short time since, leaving a widow and family in very needy circumstances. Mr. Marsh, for about 40 years, held appointments in the Royal Arsenal, in his latter years as surgery man; and, though he was frequently deputed by the Government to inquire into scientific matters, the salary he received amounted to only 30s. per week, his rating being that of a foreman. On his death his widow memorialised the Board of Ordnance for a pension. The board, in reply, have just sent her the *munificent* donation of 20*l.*! which is all they deem the services of her husband entitle her to.

Coal and Gas.—During the darker months, 800 tons of coal are used, on an average, per day, by the gas companies in the metropolis for manufacture of gas.

Mining in Australia.—At the Adelaide Mining Company's adjourned general meeting, held at Payne's Hotel, it was determined that the possession of 20 *5l.* shares should constitute eligibility for the office of director. Seven shareholders were elected in conformity with such regulations, and the solicitor, auditors, and secretary of the company, were duly chosen. A specimen of copper from one of the company's sections, having been assayed, was found to contain 59½ per cent. of metal, and we are assured that some specimens of ore were found on the company's lands yesterday, containing, in conjunction with copper, a white metal resembling native silver; but, we believe, no analysis has yet been attempted. Argentiferous galena has been found here in conjunction with copper, more than once; and why not native silver?—*South Australian Register.*

THE COPPER TRADE.

We extract the following from the letter of the Birmingham correspondent of the *Morning Chronicle*—our own remarks on the subject will be found in another column:—"By the tariff of 1842, a duty was levied for the first time on the importation into this country of foreign copper ores; the duty was imposed avowedly by way of experiment—the President of the Board of Trade for the time being expressly stating, in his place in Parliament, that the question was open to revision. Copper smelting had previously been carried on almost exclusively in this country, the ore being chiefly brought from the mines of Chili. As there are no manufactures in Chili, the Chilian merchants and miners were supplied by British manufacturers on the principle of a fair exchange of copper ore for manufactured goods, and a good trade to British shipping was derived therefrom. When the duty was imposed in 1842, strong remonstrances were presented against the imposition, by those engaged in the copper trade in Birmingham and elsewhere—it being their decided conviction that the imposition of the duty on their product, at a time when almost all similar duties were being abolished, would be viewed by the Chilian Government "as a hostile and unfriendly act, which they would meet by encouraging smelting in their own and other countries," particularly in South America and the United States. Four years have nearly elapsed since this remonstrance was presented, and events have proved that it was well founded. Another memorial was subsequently addressed to Sir Robert Peel, praying, without effect, that the duty might be abolished; and now the memorialists come forward again, urging their petition on the ground that, unless the duty be forthwith repealed, the copper trade in this country will be utterly destroyed. From facts that have recently transpired, it appears that smelting of copper ore in Chili has been most extensively resumed—that copper bars and pigs are now largely shipped to various parts in Europe, and sold under rates which the British merchant could sell for—that the Chilian Government has removed the duty on foreign coals—that negociations have concluded with the United States of America, in virtue of which the best ores will be shipped for that country—that the Americans have erected large smelting works at Boston and Baltimore—and finally, that France is also being supplied on terms which preclude our competing with the founders and smelters on the continent. Large advances having been made by British capitalists on the security of these ores, the proprietors of the mines have just been enabled to pay them off; and now it appears our copper merchants have got intimations that they will receive no more ores from Chili; and vessels that were chartered to take cargoes to England, have had their charters countermanded. These, and such like facts, are now being urged on the Government, and it is hoped that measures will be speedily adopted with a view to restore the trade thus apparently lost. As an evidence of the truth of these statements, we are sorry to point to the fact, that the brass founding, casting, and cock making trades are getting into a very depressed state; the rates paid to the manufacturers being greatly below any thing hitherto offered. And unless a revival of the trade takes place, the consequences will be seriously felt throughout this town and neighbourhood. The number engaged in the trade in Birmingham and its neighbourhood may be thus stated:—

	Brassfounders.	*Men employed.*	*Families.*
Birmingham	230	3667	14668
Wolverhampton	16	250	1000
Walsall, Dudley, &c.	34	520	2080
Total	280	4437	17,748

And if to these we add factors, factors' clerks, and others less directly dependant on the trade, we are quite sure that the number thus employed and depending on the copper trade, will not be under 20,000. A reduction of 5s. per week in wages is equal to a loss to the working men of 20,000*l.*, and the loss to England is not merely in the smelting trade, but to our manufacturers also, who now find, that as we cannot take Chilian ore, the Chilians cannot buy British goods. The experiment, in short, has been a palpable failure, and it is now time to retrieve the error by abolishing the duty."

The annexed memorial is in course of signature at Birmingham, and another, somewhat similar, at Liverpool—the latter omitting the matter referring more particularly to the shipping and smelting interests, but with the addition of some clauses, referring to the manufacturing and foreign export trades in which Birmingham is concerned.

Memorial.

TO THE RIGHT HON. THE LORDS COMMISSIONERS OF HER MAJESTY'S TREASURY.

The Memorial of the undersigned Merchants, Manufacturers, Brass-founders, Coppersmiths, Metal-merchants, &c., of Birmingham—Respectfully showeth,

That your memorialists have already, on various occasions, addressed her Majesty's Government on the evils, impolicy, and hardships to which they have been subjected by the duty levied for the first time by the tariff of 1842 on the importation of foreign copper ores, such duty having been at the time expressly stated by the then President of the Board of Trade, in his place in the House of Commons, to be an experiment open for revision.

That Chili has for many years been an extensive and increasing customer for British fabrics; but, not being a manufacturing country, possesses but few means of repayment for our manufactures, except by her copper ores. That the copper ores of Chili are, therefore, of great advantage to the British merchant, as a return for his exports of British manufactures, as well as to the British smelter, from their excellent quality, and to the British shipowner, as affording back cargoes to his vessels, which might, without them, have to return in ballast.

That the British miner had not only large and ample protection in the necessary expense of labour, as well as in the cost of conveyance from the mines to the shipping ports (from which they are in all cases in Chili very distant), and in the length of transit to this country, the cost of which is materially enhanced by the carrying of these ores being now exclusively confined to British shipping—but that he also derives much benefit from the copper trade being mainly concentrated in this country—a circumstance which must evidently tend to the maintenance of greater steadiness in prices, by giving to the British copper trade the command of foreign markets.

That the smelting of copper ores in Chili previous to 1842 had been gradually decreasing, and had nearly ceased, the miners finding it more advantageous to sell, or consign their ores for sale, to the British merchants.

That, subsequently, your memorialists have shown that in Chili the smelting of copper ores has been most extensively resumed, and that new works have been established in parts of that country where wood and coal are plentiful—parts in which smelting had not heretofore been practised—and that, in consequence, instead of copper ores, copper bars and pigs are now largely sent to Europe, whereby the continental copper and brass manufacturers are supplied, to the injury of the British smelter, the manufacturing interest, and of the shipowner; whilst in the United States, where heretofore the smelting of copper did not exist, measures have been taken for smelting, and particularly two smelting-works, upon an extensive scale, have been established—one at Boston, and the other at Baltimore—and are now in operation; considerable quantities of copper ores have been received in that country from Chili, and contracts for Chilian ores have been entered into, and are offered by United States merchants, who have proffered to pay beyond the price obtained for similar ores in the English markets, as your petitioners are prepared to prove. Copper ores have also been sent from Chili to France and Sweden—a circumstance heretofore unprecedented—and the evil effects of the duty are further and more conclusively shown by the serious falling off of the import of South American copper ores into England, and the diminution of the duty temporarily derived from that source.

That during the last session of Parliament your memorialists laid their case before the late Prime Minister, who admitted it to be a strong one; but the financial arrangements for the year having been made, no alteration could then be admitted. That though, from circumstances connected with the loans to the Chilian miners and other facts, which have been adverted to, the imports of Chilian copper ores did not immediately fall off upon the imposition of the duty in 1842; yet that such falling off has now decidedly manifested itself, as is shown by the diminution in the amount of duty received, as derived from the Parliamentary returns—the sum obtained from this source in the year ending 5th Jan., 1845, having been 75,201*l.* 0s. 10d., whilst in the year ending 5th Jan., 1846, it was only 59,000*l.*, being a falling off of 16,000*l.*, or 21 per cent. in one year; and as it is believed that the result of the current year will show a yet more decisive decrease, it is respectfully submitted that this source of revenue must soon cease to be productive.

Your memorialists, therefore, venture to hope that, inasmuch as this remaining remnant of an otherwise abandoned policy is producing such manifest and irreparable injury to the numerous and important interests involved, and is endangering the existence of a trade which has become important to many, and essential to some of the trading interests of this kingdom, and which is disturbing our friendly commercial relations with a rising and industrious country, no considerations founded upon the small and yearly decreasing revenue derived from the duty will be allowed to prevent its immediate repeal, the propriety and even pressing necessity of which they respectfully urge upon your lordships' consideration.

1. That an extensive trade in the manufactures of this town and neighbourhood is carried on to the states of South America, and the Island of Cuba, and that your memorialists are much interested in the unrestricted import of foreign copper ore, as it is the most available return for the value of their exports.

2. That there has been of late years a great falling off in the export to the Continent and America of British manufactured articles of brass and copper, in consequence of the same being supplied by manufacturers in Belgium and France, who have unrestricted trade in foreign copper and copper ore.

3. That this is a very important branch of the manufacturing trade of this town and neighbourhood; the metal brass and copper entering into the composition of most of the articles on which the largest portion of the population are employed.

4. That the price of copper in this country, notwithstanding the decline in the value of the manufactured articles abroad, has maintained a high range for the last two years; and that your memorialists consider that this has been supported by the restricted introduction of foreign copper ore, which is peculiarly adapted to the preparation of fine metal much required in the Birmingham manufactures.

Platinising by the Moist Way.—Manufacturing and operative chemists will find it exceedingly valuable in order to produce a covering of platina for their copper, &c., vessels. The experiment succeeds best when we make use of a dilute solution of the double chloride of sodium and platina. Three immersions suffice; between each immersion it is necessary to dry the surface with fine linen, rubbing rather briskly, after which it must be cleaned with levigated chalk before re-immersion. When copper has been gilded in the moist way, the gilt surface has not a beautiful tint; but, if the copper be previously covered with a pellicle of platina, a very beautiful golden surface may be produced. —*Pharmaceutical Times.*

Colds, Coughs, and Asthmas Easily Cured by Holloway's Pills.—Let no person suffering from asthma consider himself as past all cure, even if so bad as to be unable to lie down in bed, without trying the effect of these celebrated pills, as a few doses will soon carry off the phlegm and oppression from his chest, and produce a healthy action of the lungs. A proper course of this famed medicine will ensure a cure. Inveterate coughs and colds will soon yield to the like treatment. The testimony of the Rev. David Williams, Wesleyan minister at Beaumaris, is to this effect most astonishing.—Sold by all druggists, and at Professor Holloway's establishment, 244, Strand, London.

THE SMELTING TRADE IN NEW SOUTH WALES

Our readers will have observed, from our recent extracts from the South Australian papers, that the miners in that colony are prosecuting their labours with increased energy, and with astonishing success. It is estimated that, in the shipping season of 1845 and 1846, there will be about 2500 tons of ore exported, valued at 51,000*l.* In a short time the value of their ores will no doubt exceed that of their wool. And, notwithstanding the recent disturbances in New Zealand, shipments of ore from that colony continue to reach Sydney.

With the mining operations in these colonies, thus rapidly on the increase, it is daily becoming a matter of great importance to the colonies of New South Wales, that they should participate in the advantages of this new and profitable branch of Australian trade. While our neighbours in South Australia and New Zealand are turning their copper and lead mines to most profitable account, why should our coal-pits be made only half available in the promotion of individual and national prosperity? While coal can be supplied in this colony in great abundance, of excellent quality, and at as low a rate as in the mother country, why should the ores of South Australia and New Zealand be carried more than half round the world to be smelted; and returned again in a manufactured state almost to our own doors? Just simply, because the colonists of New South Wales are wanting either in the enterprise or the capital requisite for carrying on the smelting trade in our coal districts. It certainly cannot be that this colony is deficient in the resources for carrying on the business to great advantage. We have on more than one occasion pointed out the facilities which the port of Newcastle offers for the establishment of smelteries. We shall again briefly recapitulate these, with the view of bringing the importance of the subject once more under the notice of the colonial public, and also with the hope of showing some of the gentlemen who are largely engaged in the smelting trade at Swansea, and other places in the mother country, that it would be more to their advantage to form establishments at Newcastle, in this colony, for smelting the South Australian and New Zealand ores, than to have these ores brought some 17,000 miles to their smelteries in Britain, and re-conveyed thence, in a manufactured state, almost an equal distance to India—which is by far the largest market in the world for copper, and which annually consumes about one-third of the total exports of brass and copper manufactures from Great Britain.

As regards all raw material, which is bulky in proportion to its value, the cost of its freight to market exercises a most material influence on its profitable productions. It is, therefore, equally to the interest of producers and manufacturers, that this expense should be kept down as low as possible. It is in this respect that Newcastle holds out the chief advantages over any place in the mother-country as a smelting depôt for Australian ores. It is placed almost midway between South Australia and New Zealand, and is readily accessible from both places. The present freight of South Australian ores from Adelaide to Swansea is about 4*l.* 10s. per ton. The cost of exporting New Zealand ores is, no doubt, much about the same. With this amount of freight, we have been assured by a gentleman largely engaged in mining operations in South Australia, that it does not pay to export ores worth less than 15*l.* per ton. The inferior ores of these colonies are thus rendered valueless, the cost of freight acting as a prohibition upon their export. And yet ores of this kind are essential to the manufacture of copper, because they are required to reduce the richer ores to the proper temper. But the smelters in the mother country can obtain a full supply of inferior ores nearer home; and there is, therefore, no profitable market for those which have to pay a freight of 4*l.* 10s. per ton. From this cause the inferior kinds of Australian and New Zealand ore (and of the latter they form rather a considerable proportion), will be so much dead stock in the hands of the miners, until smelteries are established within such a distance as will admit of their profitable export—until, in fact, smelting is carried on in this colony. Were smelteries established at Newcastle, a remunerative market would be at once opened for all the ores produced in the two colonies; and we have good authority for saying, that these are so varied in quality that there would be no difficulty in obtaining all the kinds requisite for the manufacture of first-rate copper. There would thus not only be a most material saving in the freight of the superior ores, but a value would actually be created for the inferior descriptions.

The saving in freight, if the smelting trade were carried on at Newcastle, would not be less than three-fourths, and in all probability would amount to four-fifths, of the present cost. The distance from Adelaide to that port is, in round numbers, about 1300 miles, and from New Zealand about 1000. The voyage from both places is free from difficulty; and the port to such vessels as would be likely to be engaged in the trade, is safely accessible at all times of the tide. The port is situated on the coast, and is protected from the violence of the ocean by a breakwater, which is now nearly completed. There would, therefore, be none of the delays or risks of river navigation, to be encountered. The average period of the voyage to and fro would not probably exceed two months. The smelteries could be erected close to the harbour; and as the coal-pits are situated on a gentle eminence a short distance from the town, there is every facility for making tram-roads for the conveyance of coals down to the wharf. Unloading the ores, and reloading with coals, would, therefore, occupy only a few days. Supposing that a collier-built craft, of about 150 tons, but capable of carrying about 200 tons (similar to those engaged in the coal trade at home), were employed, they would probably be able to perform about six voyages a year; and as they would have a full cargo both ways, a charge of about 15s. per ton, it is estimated, would cover all expenses, and leave a handsome profit to the owners. But taking the freight at 1*l.* a ton, this would be a saving of more than three-fourths of the present cost.

In addition to this, there would be a saving of freight in exporting the manufactured copper to India. Many vessels now leave this colonny for that country in ballast, for the purpose of obtaining home cargoes; and others are employed in conveying horses thither. The rate of freight would, therefore, be light—very much less than from the mother country.

The saving which would be thus effected, in the expense of importing the ores and exporting the copper, by smelting at Newcastle, instead of in the mother country, may be very safely estimated at 3*l.* 10s. per ton on the ores, and 1*l.* 10s. on the manufactured article. This amount would be so much clear gain to the miners and smelters; and the former would also reap the advantage of a market for their inferior ores, which at present they do not possess. Considering that the miners of the two countries will probably in a short time raise some 10,000 tons of ore annually, it is obviously of importance to both classes, that the smelting should be carried on under the most favourable circumstances.

With regard to coals—the supply at Newcastle may, for the present generation, be said to be unlimited, and the quality is excellent. The price at present charged by the Australian Agricultural Company is 7s. per ton. But we have reason to believe that, for smelting purposes on an extensive scale, coals could be supplied at Newcastle for 1s. or 2s. per ton less. This would bring them down to, if not below, the lowest cost at the Swansea smelting-works. The carrying on of the smelting trade at Newcastle would afford facilities for supplying the miners and the inhabitants of South Australia and New Zealand with coals at the lowest possible cost.

The only respect in which this colony does not possess superior or equal facilities for smelting Australian ores to the mother country, is in the price of labour; and this advantage would not be so serious as might at first sight appear. The price of town labour here, notwithstanding the present demand for grazing, and agricultural purposes, is in some branches of trade not higher than at home, and the supply is not deficient. The market for this description of labour was altogether overdone at the immigration period, and the extra supply is not yet completely absorbed. There would, therefore, be little difficulty in obtaining labourers for smelting, and at no great advance on the home prices.

We have thus, we think, briefly glanced at the chief points of comparison between Newcastle and Swansea as smelting depôts for the ores of these colonies; and the advantages, on the whole, appear to us to be most decidedly in favour of colonial smelting. We can only hope that those who are in possession of the means and appliances for establishing smelteries will take the same view of the subject.—*Maitland (New South Wales) Mercury.*

LITERARY NOTICES.

Bradshaw's Monthly Railway and Steam Navigation Guide, for Great Britain, Ireland, the Continent, and Foreign Parts, for November.

With the onward march of the railway system, this useful work of reference, for all who are engaged in travel, either for pleasure or on commercial affairs, monthly increases in size, quality, and importance. The Number before us contains such a bulk of information, with reference to travelling, by land and sea, that, had it not been a gradually increasing publication—growing, by degrees, from the force of circumstances, to its present volume—it never could have been published for double the money. The principal improved feature in the present volume is a new map, in addition to that in former Numbers; in the old one, all the projected schemes are introduced—in the new, those, with all abortive ones, are rejected—thus enabling a traveller, upon referring to the present map, at a glance, to understand how far he will be enabled to travel by railway; and, we understand, the proprietors intend to add, monthly, such additional parts as may from time to time be opened to the public—the lighter lines represent the railways already sanctioned by Parliament, but not constructed. The whole information is of the usual correct and interesting character, and the new map renders all the details still more valuable. It is, indeed, an indispensable requisite for all inns and waiting-rooms.

Railway Register, for November. London: J. Weale, High Holborn.

In the Number before us the principles and process of railway investment is continued—the portion under consideration being the Share System, and its effect on the capital and industrial resources of the country. There is a review of a pamphlet, on the Railways of India, by "An Old Indian Postmaster," in which, if he does not take exactly a right view of the best method of carrying out a system of railroads for that country, he shows, at least, a knowledge of the difficulties to be encountered, and the necessity of due consideration, before any system is hastily adopted. There are two illustrated articles—one on Clarke and Varley's application of air as a motive-power—the other, on Powell's transferrable carriages, to remedy the evils of a break of gauge. The Portfolio contains the original prospectuses of the South-Western Company, with several of those afterwards issued, and reports of several early meetings, which will be read with much interest—being a collection of numerous documents into one focus, which cannot, perhaps, be got at from any other source.

Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

THIS DAY .....West Wheal Maria Mining Company—on the mine.
MONDAY.....Equitable Gas-Light Company—office, at One.
TUESDAY.....Botallack Mining Company—on the mine.
Northern and Southern Connecting Railway—London Tavern, at One.
WEDNESDAY...Rhymney Iron Company—offices, at One.
THURSDAY....Trinidad Railway—London Tavern, at One.

[*The meetings of Mining Companies are inserted among the Mining Intelligence.*]

IMPERIAL AND CONTINENTAL GAS ASSOCIATION.—The half-yearly meeting of shareholders was held, on Thursday, at the offices of the company, White Hart-court, Lombard-street,—Sir MOSES MONTEFIORE (chairman of the board of directors) presided. The SECRETARY read the report, detailing the operations of the association since the last meeting, by which it appeared that the affairs generally were in a healthy state. The association had expended, in furtherance of the object for which it was established, the entire amount of paid-up capital (150,000*l.*) authorised to be raised by their Act of Incorporation, and a greater sum might be invested with advantage. After some discussion, and suggestions as to the most desirable mode of extending the operations of the association in the various continental towns of Europe, a dividend of 2*l.* 2s. 6d. per share for the half year, payable in January next, was declared, and the customary vote of thanks to the chairman having been passed, the proprietary, a large number of whom attended, separated.

AMALGAMATION OF THE CHESTER AND BIRKENHEAD, AND BIRKENHEAD, LANCASHIRE AND CHESHIRE JUNCTION RAILWAY COMPANIES.—The difficulties experienced in the effort to amalgamate these two companies have at length been removed, and an arrangement come to between the two boards which must be satisfactory to the shareholders in both companies; and, by placing the entire scheme under one management, greatly facilitate the profitable working of these lines. The terms of the arrangement are the following:—The Chester and Birkenhead shares are to be taken at 55*l.*, upon which the proprietors are to receive interest for three years from the 1st January, 1847—the first two years at the rate of 5 per cent., and the third year at 6 per cent. The earnings of the lines during the three years, of course, go into the amalgamated funds. The Cheshire Junction shares are to be rated at par, or 33*l.* 6s. 8d. each. A meeting of the shareholders of each line will be called as soon as possible, to confirm this arrangement. The extension line from the Chester and Birkenhead to the new docks will be commenced this month; and on Saturday (this day) the first sod of the Cheshire Junction line will be cut by Sir R. B. Brooke, Bart., upon his property at Norton.

SOUTH DEVON RAILWAY.—The line to Torquay advances rapidly towards completion, the directors being desirous of having it ready to open as soon after the line to Newton as possible. Mr. Brunel visited the latter line last week, when the directors had a very anxious meeting—reports as to the atmospheric principle having been more than usually fluctuating: the engine houses, pipes, valves, &c., are nearly completed.

GREAT WESTERN AND SOUTH WALES RAILWAY.—It is reported that the terms of agreement entered into between the Great Western and South Wales Companies have been modified, to the extent of guaranteeing the shareholders of the latter undertaking 5 per cent. in perpetuity, with equal division of surplus profits above that amount, five years after the opening of the line; and that the intended provision for amalgamation at the expiration of 10 years, which was considered objectionable in some quarters, has been by common consent withdrawn.

EASTERN COUNTIES RAILWAY.—Application is intended to be made to Parliament next session for an act to construct wharfs, docks, piers, and other erections at or near Gallon's-reach, in the Thames; and also a branch to connect the Eastern Counties Railway with the docks. The line will commence at the docks, near the boundary of the parishes of Barking and Woolwich, and pass through Woolwich, Barking, East Ham, and West Ham, terminating by a junction with the Eastern Counties at Caernarvon-hall-bridge.

CHESTER AND HOLYHEAD RAILWAY.—The contracts are being vigorously prosecuted, and it is expected that the entire 84 miles will be completed in 18 months. About 14,000 men are engaged between Chester and Conway, 40 miles—which is to be open in six months.

THE SHREWSBURY AND CHESTER.—The first line for North Wales, and leading into the most romantic regions, was opened between the latter place and Ruabon, on Wednesday, at 1st-class, 3s.; 2d-class, 2s. 6d.; 3d-class, 1s. 5d. Day tickets from Chester and Ruabon stations: 1st-class, 4s. 6d.; 2d-class, 3s. 9d.

COCKERMOUTH AND WORKINGTON.—Five successive miles of permanent rails have for some time past been laid down on this line.

EDINBURGH, LEITH, AND GRANTON.—This line, in connection with the North British, and Edinburgh and Glasgow, is soon to be completed.—Messrs. Buchanan and Williamson report that the works have been completed, in a most satisfactory manner, by Mr. W. Patterson, superintendent.

OXFORD, WORCESTER, AND WOLVERHAMPTON.—Active operations have been commenced on this line in the vicinity of Kidderminster—a number of men are actively employed on the works on the Worcester road, and it is said that the contractors intend to commence in several other places on the line in the course of a few days.

The projected London, Oxford, and Cheltenham announce, that arrangements have been made with the Gloucestershire and Herefordshire Canal, under which an application to Parliament, in the next session, will be made, with the co-operation of the canal company, for a line, on the narrow gauge, from Gloucester and Hereford, in continuation of the London, Oxford, and Cheltenham.

The London and North-Western intend applying during the next session of Parliament for an act to make a railway from Wellingborough to Bletchley, forming a junction at the latter place with the London and North-Western, and the Bicester and Oxford lines. The surveys are already in a forward state. They are also about to make a commodious and handsome railway entrance to, and improvements at, the Northampton station.

SOUTH-EASTERN RAILWAY—KENTISH LINES.—The following are the lines intended to be applied for next session. The North Kent and Bricklayer's Arms Junction, which is to connect the Greenwich and North Kent Railway with the Bricklayer's Arms Branch. The North Kent from the South-Eastern, Gravesend, and Rochester line at Stroud, to join the Canterbury, Ramsgate, and Margate Railway at Chilham, with branches to Sheerness and Faversham Creek. The Mid Kent and Tonbridge Direct, from the North Kent and South Eastern Railway, at Lewisham, to Tonbridge, with branches to Dartford, Sevenoaks, Maidstone, and Paddockwood. The Maidstone and Chart Branch, from the South-Eastern, at Maidstone to join that railway again at Great Chart, near Ashford. The Croydon and Bromley Branch, from the North Kent, at or near Lewisham, to Croydon and Bromley. The Stroud and Maidstone Branch, from the Gravesend and Rochester Railway, to Stroud and Maidstone.

LONDON, BRIGHTON, AND SOUTH COAST.—This company intend going to Parliament next session, for Acts to construct the Kent Railway to Maidstone, Canterbury (direct lines), and Tonbridge; and also a direct line to Maidstone, with an extension therefrom to the South-Eastern at Tonbridge.

NEW STATION AT LONDON-BRIDGE.—The London and Brighton and South Coast and South-Eastern Railway Companies are making preparations for the erection of a large and elegant station, to supersede the present incommodious building. It is designed to extend from Joiner-street and New-street on the west, Maze-pond and Wells-street on the south and south-west, to the London and Greenwich Railway on the north of Crucifix-lane. The streets at present passing under the station are to be blocked up.

A new goods engine, the *Vesuvius*, has been launched on the Great Western. She is a six-wheeler, coupled; diameter, 5 ft.; cylinder, 18 in.; stroke, 24 in.; boiler, 16 ft.; weight, without water, 36 tons, and when loaded with tender, 56.

THE NEW RAILWAY COMMISSIONERS.—On Monday, the new Railway Commissioners, in pursuance of a notification in the *Gazette*, opened their offices in Great George-street, Westminster, and began to act in execution of the statute of last session (9 and 10 Vic., c. 105), where specifications, &c., for intended bills in the next session, must be delivered by the end of the present month. The Commissioners are—the Hon. E. Strutt (president), Earl Granville, Sir E. Ryan, and Capt. H. R. Brandreth. It was considered expedient to constitute a separate department for the railway business, and to remove the superintendance thereof from the Board of Trade. Her Majesty was empowered to appoint five commissioners, but only four have been gazetted. Any two of the Commissioners are competent to act in execution of the powers vested in them. The second section provides that from and after the day which shall be so specified (Monday last) as the day on which the said Commissioners shall begin to act in execution of the statute, all the powers, rights, and authority now vested in, or exercised by, the Board of Trade, under any Act, with respect to any railway or intended railway, shall be transferred to, and vested in, and exercised by, the Commissioners of Railways as fully as if they had been named in the said several Acts of Parliament, and all the provisions of these several Acts shall be deemed to apply to the said Commissioners, instead of the Board of Trade; and all proceedings pending shall be continued and carried on by and before the said Commissioners, who shall have and exercise the same powers, rights, and authority, in respect of all such proceedings, as if they had been originally commenced before the said Commissioners. By another provision an office is to be opened, to which all notices and other documents are to be given or sent. All documents sealed with a seal, and signed by two or more of the Commissioners, are to be received in evidence in all courts, and before all justices and others, without any further proof thereof. After providing for the appointment of officers, the payment of their salaries, &c., the Act goes on to state that the Commissioners are to exercise the powers vested in the Board of Trade, to prevent companies acting contrary to the Acts constituting them railways. The Commissioners are to report to her Majesty, and both houses of Parliament, upon any case specially referred to them. An important part of the Act has reference to "local inspection and survey" by the Commissioners or their officers, and the expense incurred thereon is to be paid by the promoters of the intended line. On a matter being referred to them, the Commissioners may inquire and report, on local inspection or otherwise, whether there are any lines or schemes competing with the proposed railway; whether it is proposed to unite with any other railway, &c.; whether it is proposed to constitute a branch, and whether the plans, maps, and sections deposited are correct. The Act is now in force, and much good is expected to result, especially from "local inspection and survey" in respect to railways and proposed lines.

Law Intelligence.

ARIGNA IRON AND COAL COMPANY—DIRECTORS' FEES.

VICE-CHANCELLOR'S COURT—NOV. 10.

WILSON *v.* PARKER.—This was a bill filed for the transfer of the sum of 10,000*l.* Consols, standing in the name of the defendants and others, into the names of the new trustees, under the Act of Parliament for forming the Arigna Iron and Coal Company. Mr. Parker had been a director and trustee of the company, and had been re-elected four times, but at length another party had been elected in his stead, and by the provisions of the Act, it was insisted that no person was eligible as trustee who was not a director. Mr. Parker contended that the true construction of the act was not so, but, on the contrary, it was thereby declared that the fund should not even be transferred, until the happening of an event which never took place—namely, the raising of another fund of 20,000*l.* He also claimed a right to hold the fund until a claim he had against the company to the amount of 1200*l.* was paid; more especially, as one of the purposes for which the 10,000*l.* fund was raised, was to answer such expenses as those in respect of which his claim arose.—Mr. Russell and Mr. Heathfield appeared for the plaintiffs; Mr. Wigram and Mr. Chandless, for Mr. Parker; and Mr. Lee, Mr. Haig, and Mr. Westoby, for other parties.

His HONOUR: I am of opinion, upon the construction of the Act of Parliament, that the trustees for the time being ought also to be directors; and that, where the character of a director ceases, the character of a trustee must also cease. I am of opinion, also, that it would be contrary to the intention of the Act, which is to be collected, of course, from its language, if a trustee were allowed to set up a demand of his own against the company generally, by way of lien upon this fund, or as a reason, in any sense, for not transferring the fund to new trustees, supposing the transfer to be otherwise proper. It is said, however, that the demand in question is a demand of a trustee in his character of trustee, but it is not said to be a demand in respect of charges or expenses incurred in reference to this fund. But it is said to be a demand merely for the purpose of making a demand on the company, or on the general funds of the company, for remuneration for attendances on the general business of the company, a right given, not by the Act of Parliament, but by a deed prior to the Act of Parliament. Assuming that the defendant has any right under the Act of Parliament, or by agreement, to recover payment, this remuneration for attendances at meetings, I am of opinion that he has not a right, for the purpose of enforcing or securing payment of his demand, to interpose any delay in the way of making the transfer in question. I had been disposed to consider at one time, that the proper mode of framing the decree would be to refer it to the Master, to inquire whether the proposed trustees were directors and fit persons to be trustees of the fund under this Act of Parliament, but I have a precedent before me which makes it unnecessary for me to follow that course. I have before me a case, constituted as this is, by one director on behalf of the company against a certain individual, without having before the court the parties who had been selected by the company to be the new trustees. That order, which I have before me, directs the transfer at once to the directors, who had been so selected by an order of the directors of the company for that purpose. I shall willingly follow that precedent, as I shall thereby save delay and expense.

On Wednesday morning, Mr. CHANDLESS proceeded to address the court on the question of costs, which had not been disposed of. He submitted that the argument used on the other side—namely, that the defendant ought to pay the costs of filing the bill, because he had refused to transfer the fund to trustees who had been appointed under the same instrument, defective or not, as that under which he himself held the money, without the direction of the court, was vicious, both in fact and in law; for, although a man who is affected to be appointed a trustee by an inoperative instrument is no trustee at all, still, if funds come to his hands, he does become a trustee of them, and cannot discharge himself of responsibility by making a transfer to other trustees equally ineffectually appointed as he was. Mr. Parker was bound, for his own safety, to see that the parties to whom he transferred the money were properly chosen trustees, and, as the Act of Parliament did not contain any power to appoint new trustees, the court was the only authority to which he could appeal for the purpose.

His HONOUR was of opinion, that had Mr. Parker so conducted his case as that the only difficulty raised had been such as was occasioned by his construction of the Act of Parliament, whether or not his Honour would have agreed with such construction, he did not say, he should have given Mr. Parker his costs; but as he had not done so, he should with two exceptions give no costs on either side as to the hearing; one exception was, that Mr. Parker must pay over to the plaintiff the costs which the plaintiff had been ordered to pay to Mr. Morgan, as Mr. Parker's and Mr. Morgan's defences ought not to have been severed, and would not have been so had Mr. Parker confined his defence as before mentioned. The other exception was, that the plaintiff must pay to Mr. Parker the costs occasioned by the allegations and charges contained in the bill as amended in 1844, and as were struck out by the amendments in 1845. The stock was to be transferred to the new trustees; all subsequent costs to be reserved.

TALACRE COAL COMPANY—HOWARD *v.* SHAW.—In the Court of Chancery, Dublin, Mr. FITZGIBBON, Q. C., for defendant, applied to the court to supersede the commission of bankruptcy issued against him, in consequence of a compromise entered into between the parties, by which it was agreed that the defendant (Mr. Shaw) should pay to the plaintiff the sum of 8000*l.*, in consideration of all demands.—Mr. STEPHENS, on the part of the plaintiff, assented to the application, and his lordship directed the commission to be superseded, observing that the proceeding on the part of the defendant was most honourable.

IMPORTANT DECISION—SOWERBY *v.* PONTOP RAILWAY COMPANY.—This case, to compel the fulfilment of an agreement entered into by the Pontop Company to lead coals for a term of 21 years for the Waldridge Colliery, on certain terms and conditions specified, has been decided, by Vice-Chancellor Knight Bruce, in favour of the owners of Waldridge Colliery.

It is said that the law officers of the Crown are at present taking into consideration how far the nature of the securities offered by Irish lines, in favour of which baronies have made presentments, are compatible with those for which loans have been granted by Government in other cases.

Interest of 5 per cent. per annum is to be allowed on all payments made by proprietors in the Vale of Neath in advance of calls.

CONTINENTAL RAILWAYS.—The number of railways on the continent at present in full operation amounts to 83. Of this number, 18 are in France, the total length being 843 miles; in Belgium there are 13, forming, in point of length, between 600 and 700 miles; upon the borders of the Rhine there are 11 railways, making a total in length of 567 miles; in Prussia and the German States there are 24 railways, the length of rails being upwards of 1100 miles; in Austria, Bavaria, &c., there are 12 railways, the length being upwards of 860 miles; in Holland only two, with a length of 96 miles; and in Italy the same number, length 62 miles.

ANOTHER BRIDGE ACROSS THE THAMES.—Notice has been given to the public, that application is intended to be made to Parliament in the next session for leave to bring in a bill for making and constructing a bridge over or across the River Thames, at from or near Essex-street, Strand, to the opposite shore, at or near to Dowson's-wharf, in the Marsh and Wall liberty. Also for making and maintaining a market, at or near the south end of the proposed bridge; and also to obtain powers for the compulsory purchase of lands and houses, and to levy tolls, rates, or duties in respect of the said bridge and market.

WORK FOR THE IRON TRADE.—About 1700 tons of iron rails, and 600 tons of iron chairs, are wanted for the works of the East Lincolnshire now in operation. The Sheffield and Lincolnshire Junction also notify that they are prepared to receive tenders for the supply of 1500 tons of iron rails, each rail to be 15 ft. in length, and weighing about 70 lbs per yard. They are plausibly circumspect as to having the exact process of manufacture described which it is proposed to adopt, so as to produce the best quality of iron in the rails. It is indispensible that the party whose tender may be accepted, shall give full authority for an agent to inspect the process of manufacture adopted at the works. They are also prepared to receive tenders for the supply of 500 tons of iron chairs. The joint chairs weighing about 30 lbs., and the middle chairs about 20 lbs. The chairs to be cast from best No. 2 pig-iron (without any admixture of Scotch), and run from the cupola, and must be manufactured by Ransom and May's patent process.

THE SALT TRADE.—The *Gloucester Journal* says—"We hear that the Midland Company will shortly arrange for special salt trains, to carry 150 tons each to Gloucester at regular intervals, and that they are under promise to provide slips for shooting the salt into the vessels in the canal. Should these, and some other appliances for carrying on the salt trade be properly and quickly carried out, we may be able to anticipate the efforts which are being made at Hull to supplant us, and may be in a condition to put salt on board ship at Gloucester as cheap, if not cheaper, than at Liverpool."

The coal trade at Maryport continues very brisk, owing to the high prices still maintained in the Dublin and Belfast market. The coal proprietors, however, though some of them are opposed to *monopoly* in most other articles, are perpetually raising the prices on this side, so as to keep pace with the rise in the Irish market; but they never think of reducing to meet the uncertain and fluctuating scale in Ireland. The railway has done much towards facilitating the shipment, and now that the harbour accommodation is considerably enlarged, there is not so much delay as formerly. The weekly shipments of coal from this port do not average less than 3600 tons! We well remember the time when but a tithe of this quantity was raised in the neighbourhood, and yet the shipping agents of the respective collieries have to exercise great vigilance night and day tides to solicit for customers! This great nuisance to both parties exists now only in the recollection of it—no such humbug prevails.—*Whitehaven Herald.*

The South Devon are about to take tenders for their sets of first, second, and third-class carriages.

ARRIVALS FROM SOUTH AUSTRALIA.—A short time since we announced the arrival of a cargo of copper ore from the above colony. We have now to report another consignment to Messrs. Bath, of 400 tons of copper ore from Port Adelaide, per the *Essex*, Smith, master. The vessel likewise brought home a quantity of wool, gum, &c. The *Mary White* was to have left Port Adelaide ten days after the above vessel, with a similar cargo, for Swansea. The value of these cargoes is about 8000*l.* each, so that our readers may imagine the immense trade opening between Swansea and this important colony since the recent discovery of its copper ore. In fact, it is impossible to conjecture the extent to which the trade may be carried.—*Cambrian.*

OFFICE FOR PATENTS, 7, STAPLE INN, HOLBORN.

J. MURDOCH (successor and late assistant to Mr. Hebert)
Informs INVENTORS and PATENTEES, that, at his OFFICE, they can obtain
REFERENCE TO A CLASSIFIED LIST OF PATENTS,
(THE ONLY ONE EXTANT), which shows at one view all the Patents ever granted for any particular object, whereby they may save much trouble and expense, and procure information not otherwise obtainable. BRITISH and FOREIGN PATENTS OBTAINED, and USEFUL and ORNAMENTAL DESIGNS REGISTERED.
SPECIFICATIONS carefully prepared, and REPORTS of ENROLLED SPECIFICATIONS furnished on moderate terms.
FINISHED and WORKING DRAWINGS executed with accuracy and dispatch.

UNIVERSAL GAS BURNER—THIRTY TO FIFTY PER CENT. SAVED!—The PATENTEES beg to call public attention to the following facts. The advantages resulting from the invention are various and striking. Independently of a saving of 30 to 50 per cent., the combustion is perfect, and the brilliancy produced superior to any light hitherto discovered. It emits neither smell nor smoke, and burns steadily for any period; and such is its purity, that it neither affects nor soils the most delicate colour or the finest fabric. Objections have been made to the introduction of gas in dwelling-houses, to the expense of fittings, to its destruction of furniture, draperies, gold moulding, &c.; these are entirely obviated by the PATENT UNIVERSAL GAS BURNER. As the cost of laying on gas is much lower than is commonly supposed, it is adapted for private dwellings, as well as for club-houses, hotels, manufactories, and public buildings. One of the small burners is amply sufficient to light a good-sized room, at a sum immeasurably lower than spirit, oil, or candle, with the avoidance of waste or trouble.

The merits of the "Burner," its brilliancy and economy surpassing every other known light, are shown by the annexed authentic opinions of the qualities of the UNIVERSAL GAS BURNER.

EXTRACT from the "Proceedings of the Institution of Civil Engineers," Tuesday, May 26 1846—Sir JOHN RENNIE, president, in the chair.

"A gas burner, of a novel and ingenious construction, was exhibited. The principal novelty was the introduction of a stream of air to the centre of the flame by a hollow button in the middle of the burner. The air passing up through the hollow stem of the button, was heated, and passed out by two series of fire-holes around the periphery, and impinging with force on the flame of the gas curved it outwards in the shape of a tulip, while the oxygen of the air, mingling with the carburetted hydrogen gas, produced a very perfect combustion. The *flame was quite white down to the top of the burner*—was very steady, as was amply demonstrated by the excellent light of the institution, where these burners have been used. In comparing the consumption of these burners with that of the concentric ring burners, and trying the power of the two lights by the photometer, the new burner gave a better light, with a saving of rather more than one-third.

CERTIFICATE.

POLYTECHNIC CHEMICAL SCHOOL.—"In testing Clark, McNeil, and Co's Universal Gas Burner with one of the best shadowless burners, *it gave a more pure and brilliant light*, with a saving of 20 to 25 per cent."

GEORGE CRISP, *Engineer*, ROBERT LONGBOTTOM, *Secretary*.

CERTIFICATE.

"In a series of experiments made upon Clark, McNeil, and Co.'s Patent Universal Gas Burner, its superiority was satisfactorily established in economy and the quality of the light; tested against argand burners, Nos. 4 (12 holes), and 6 (15 holes), it afforded a saving of at least 25 per cent., and against three fish-tails burners, No. 4, 40 per cent. *The colour and brilliancy of the flame is superior to any other burner.*"

T. W. KEATES, *Consulting Chemist*, J. D. PALMER, *Mechanical Inspector*.

The UNIVERSAL GAS BURNER is used nightly at the Polytechnic Institution, and may be had and seen from 11 till 4, at the patentees, 60, St. Martin's-lane Charing Cross, and of all gas fitters in London.

NO BREWING UTENSILS REQUIRED.

PATENT CONCENTRATED MALT AND HOP EXTRACT enables PRIVATE INDIVIDUALS to MAKE FINE HOME-BREWED ALE,
WITHOUT EMPLOYING ANY BREWING UTENSILS.—It has only to be dissolved in hot-water and fermented.—Sold, in jars, for medicinal and other purposes, at 1s. and 1s. 6d.; and in bottles for brewing 9 to 18 gallons and upwards of ale, at 6s. 6d. and 12s. 6d. each, by the
BRITISH NATIONAL MALT EXTRACT COMPANY,
7, NICHOLAS-LANE, LOMBARD-STREET; Petty, Wood, and Co., 53, Threadneedle-street; Wix and Sons, 22, Leadenhall-street; Batty and Co., 15, Finsbury-pavement; De Castro and Peach, 65, Piccadilly; Hockin and Co., 38, Duke-street, Manchester-square; and oilmen and grocers generally.
Also, just published, and may be had gratis,
NATIONAL BREWING: A GUIDE to the USE of CONCENTRATED MALT AND HOP EXTRACT, for BREWING and WINE MAKING; to which is added, MEDICAL OPINIONS relative to the virtues of malt and hops.

CURTIS ON NERVOUS AND GENERATIVE DISEASES.
Just published, a Medical Work, in a sealed envelope, 3s., and sent, post-paid, for 3s. 6d.

MANHOOD: the CAUSES of its PREMATURE DECLINE, with plain directions for its perfect restoration; addressed to those suffering from nervous debility or mental irritation, followed by observations on Marriage; the treatment of diseases of the generative system; illustrated with cases, &c. By J. L. CURTIS and Co., consulting surgeons, 7, Frith-street, Soho-square, London.
TWENTY-NINTH THOUSAND.
Published by the authors, and may be had at their residence; also sold by Strange, 21, Paternoster-row, London; Guest, 51, Bull-street, Birmingham; T. Sowler, 4, St. Ann's-square, Manchester; G. Phillip, South Castle-street, Liverpool; W. and H. Robinson, booksellers, Greenside-street, Edinburgh; Campbell, druggist, Argyll-street, Glasgow; and sold in a sealed envelope by all booksellers.
REVIEWS OF THE WORK.
MANHOOD. By J. L. CURTIS and Co. (Strange)—In this age of pretension, when the privileges of the true are constantly usurped by the false and fraudulent, it is difficult to afford the sufferer from nervous debility, the unerring means of judgment where to seek relief. The authors of this work have obviated the difficulty. Their long experience and reputation in the treatment of these painful diseases is the patient's guarantee, and well deserves for the work its immense circulation.—*Era.*
CURTIS ON MANHOOD (Strange).—A perusal of this work will easily distinguish its talented authors from the host of medical writers whose pretensions to cure all diseases are daily so indecently thrust before the public. Its originality is apparent, and its perusal breathes consolation and hope to the mind of the patient.—*Naval and Military Gazette.*
CURTIS ON MANHOOD should be in the hands of youth and old age. It is a medical publication, ably written, and developes the treatment of a class of painful maladies which has too long been the prey of the illiterate and designing.—*United Service Gazette.*
Messrs. Curtis and Co. are to be consulted daily at their residence, No. 7, Frith-street Soho-square, London.
Country Patients are requested to be as minute as possible in the detail of their cases The communication must be accompanied by the usual consultation fee of £1, and the work sent to any address for 3s. 6d. in postage stamps, direct from the authors, or either the above agents.

The Nineteenth Edition, price 2s. 6d.; free by post, 3s. 6d.

THE SILENT FRIEND: a medical work, on the concealed cause of constitutional or acquired debility, loss of muscular energy, and derangement of the generative system, nervous debility, constitutional weakness, excessive indulgence, &c.; with Observations on Marriage, &c. By R. and L. PERRY and Co., surgeons, London. Published by the authors, and sold at their residence; also by Strange, 21, Paternoster-row; Hannay & Co., 63, Oxford-street; Noble, 109, Chancery-lane; Gordon 146, Leadenhall-street; Purkiss, Compton-street, Soho, London.
Part I. of this work is addressed to those who are prevented from forming a matrimonial alliance, and will be found an available introduction to the means of perfect and secret restoration to manhood.—Part II. treats upon those forms of diseases, either in their primary or secondary state, arising from infection—showing how numbers neglect to obtain competent medical aid, entail upon themselves years of misery and suffering.
The CORDIAL BALM of SYRIACUM is a stimulant and renovator in all cases of constitutional or acquired debility; by its use the whole system becomes restored to a healthy state of organisation. Sold in bottles, price 11s. and 33s.
THE CONCENTRATED DETERSIVE ESSENCE.—An anti-syphilitic remedy for searching out and purifying the blood from venereal contamination, scurvy, blotches on the head, face, and body, ulcerations, and those painful affections arising from improper treatment, or the effects of mercury, or secondary symptoms. Price 11s. and 33s. per bottle; also £5 cases.
PERRY'S PURIFYING SPECIFIC PILLS are perfectly free from mercury, copaiva, and other deleterious drugs, and may be taken with safety without interference with or loss of time from business, and may be relied upon in every instance. Sold in boxes, at 2s. 9d., 4s. 6d., and 11s. each, by all medicine vendors—of whom may be had the *Silent Friend.*—Messrs. R. and L. Perry and Co. may be consulted at No. 19, Berners-street, Oxford-street, London, daily.

ON THE SECRET INFIRMITIES OF YOUTH AND MATURITY,
With 25 coloured engravings.
Just published, sixteenth thousand (in a sealed envelope), price 2s. 6d.; or post-paid to any address, for 3s. 6d., in postage stamps, or Post-office order,

SELF-PRESERVATION: A Medical Treatise, on Marriage, and on the Secret Infirmities and Disorders of Youth and Maturity. Illustrated with 25 coloured plates on the anatomy, physiology, and diseases of the urinary and reproductive organs, explaining their various structures, uses, and functions, and the injuries that are produced in them, by solitary habits and other excesses. With practical observations on the treatment of nervous debility, local and constitutional weakness, syphilis, stricture, and other diseases of the urethra. By SAMUEL LA'MERT, consulting surgeon, 9, Bedford-street, Bedford-square, London, Matriculated Member of the University of Edinburgh, Honorary Member of the London Hospital Medical Society, Licentiate of Apothecaries Hall, London, &c.
REVIEWS OF THE WORK.
"The author of this singular and talented work is a legally qualified medical man, who has evidently had considerable experience in the treatment of the various disorders, arising from the follies and frailties of early indiscretion. The engravings are an invaluable addition, by demonstrating the consequences of excesses, which must act as a salutary warning to youth and maturity, and by its perusal, many questions may be satisfactorily replied to, that admit of no appeal, even to the most confidential friend."—*Era.*
Published by the author; and may be had at his residence; also from S. Gilbert, 52, Paternoster-row; Hannay and Co., 63, Oxford-street; Starie, 23, Tichborne-street, Quadrant; Gordon, 146, Leadenhall-street, London; Newton, 16, Church-street, Liverpool; and all booksellers.
At home for consultation daily, from nine till two, and from five till eight; and all letters, immediately replied to, if containing the fee of £1, for advice, &c.—9, Bedford-street, Bedford-square, London.

BIRMINGHAM, WOLVERHAMPTON, AND DUDLEY RAILWAY.—CONTRACT FOR WORKS.—Notice is hereby given, that the directors of this company will meet at their offices, 84, Bennett's Hill, Birmingham, on Monday, the 14th Dec., 1846, at Twelve o'clock in the day, for the purpose of RECEIVING TENDERS for the construction of the following works:—

GREAT BRIDGE CONTRACT—from Vyse-street, Birmingham, to Great Bridge, being a distance of about six miles.

Drawings and specifications of the line may be seen from the 16th Nov. to the 1st Dec. (inclusive), at No. 102, Constitution-hill, Birmingham; and from the 2d Dec. to the 12th Dec. (inclusive), at No. 17, Great George-street, Westminster.

The necessary forms of tender may be obtained at those places during the above-named periods.

Tenders are to be delivered at the offices of the company on or before the 14th Dec., not later than Twelve o'clock in the day, when and where persons tendering are requested to be in attendance. 51

The directors do not pledge themselves to accept the lowest tender.

WILLIAM MATHEWS, Chairman,
JOHN WILLIAM KIRKSHAW, Secretary.

34, Bennett's-hill, Birmingham, Oct. 28, 1846.

IRON TRADE.—Any PARTY, with GOOD CAPITAL, wishing to ENTER into the ABOVE TRADE, consisting of BLAST-FURNACES, and a MINERAL FIELD adjoining, may hear of an opportunity, by addressing (post-paid) to "H. C.," at Mr. Cureton's, 49, Bread-street, Cheapside.—None but principals need apply. 52

LA JAHOTTIERE IRON-WORKS (LOIRE INFERIEURE).
COMPAGNIE EN COMMANDITE.
Constituted by Acte de Société, passed before Mr. Duclouz, in Paris, July 4, 1845.

Established under the French Law of Partnership, without personal liability to the shareholders, and under the inspection of a committee of shareholders.

Capital 1,000,000 fr., or £40,000, in shares of 1000 fr., 500 fr., and 250 fr., or £40, £20, and £10 each. 53

Deposit 25 per cent. per share on allotment—the remainder by three instalments, at intervals of four months each.—Dividend to commence from the payment of last instalment, but 5 per cent. interest allowed on each instalment in the meanwhile.

COMMITTEE OF INSPECTION.
BENJAMIN IFILL, Esq.

CLEMENT TABOR, Esq.	W. H. CADOGAN, Esq.
CHARLES POCOCK, Esq.	WILLIAM NORRIS, Esq.

(With power to add to their number.)

RESPONSIBLE MANAGERS.
T. LAMIE MURRAY, Esq., 26, Cornhill. | EUGENE DE PREZ, Esq., Nantes.
BANKERS—The Commercial Bank, Lothbury.
SOLICITOR—William Tatham, Esq., 22, Throgmorton-street.

The success which has attended the iron-works established by the company at La Jahottiere—the high price of iron in France, and the moderate cost at which the company are making pig-iron, owing to the cheapness and yield of the materials, which, by a long lease, they have secured—has induced the company to resolve on an immediate extension of the capital, in order to increase their make, and to commence the manufacture of bar and railway iron, which, for many years to come, is likely to increase in demand, and command high prices.

The company intend, without loss of time, to erect two more furnaces and a rolling-mill, and increase the make to 8000 tons of pig-iron per annum. This extension is founded on the result of experience, and may be stated as follows:—

Cost of making one ton of foundry pig-iron at La Jahottiere ..... *Fr.* 100, or £4 0 0
Selling price in France of one ton No. 1 foundry pig-iron ..... *Fr.* 195 to 220, or £7 15s. to 8 17 0

Estimated cost of one ton of bar-iron made at La Jahottiere ..... *Fr.* 195, or £7 15 0
Selling price of one ton bar-iron in France ..... *Fr.* 395 to 400, or £15 15s. to 16 0 0

The present emission of shares is made at par. Shares in iron-works in France are realising high prices, as will be seen by the following extract from the *Mining Journal* of 10th October last:—

"The iron monopoly in this country has naturally had the effect of sending up the shares in the iron establishments to an enormous price. The present price of the Decazeville shares is 3500 fr., which is seven times more than that at which they were issued. Other establishments have been yet more profitable. That of Terre Noire, near St. Etienne, for example, pays dividends equal to 75 or 76 per cent. on its original capital. Its shares are scarcely ever to be found in the market: but when by chance any do appear, there is great competition to obtain them, and it is by no means unusual to see half shares sold at from 42,000 to 45,000 fr.

In England applications for prospectuses and shares to be made to William Tatham, Esq., 22, Throgmorton-street; to R. Tredinnick, Three King's-court, Lombard-street; to the managers, or committee, under cover, to the committee of inspection.

LA JAHOTTIERE IRON-WORKS (LOIRE INFERIEURE).—Notice is hereby given, that an EXTRAORDINARY GENERAL MEETING of the shareholders of this company will be HELD at 22, Throgmorton-street, on Thursday, the 26th day of November inst., at One o'clock precisely, to take into consideration the propriety of increasing the capital of the company, under the 15th Article of the Statutes, as recommended by the committee of inspection. 54

(Signed) BENJAMIN IFILL, Chairman.

N.B.—Shareholders attending the meeting, must, three days before hand, deposit their shares, and receive a certificate, at No. 8, Rue Laffitte, Paris; the Commercial Bank of London; or with T. Lamie Murray, Esq., 26, Cornhill.

METROPOLITAN IRON AND STEEL COMPANY,
(Provisionally Registered, pursuant to Act of Parliament, 7 and 8 Vic., c. 110.)
Capital £200,000, in 10,000 shares of £20 each.—Deposit £2 per share.

A company has been formed for the MANUFACTURE OF IRON AND STEEL (from cast, scrap, and all descriptions of old refuse iron), which shall be of a superior quality to any hitherto produced in the mining districts.—The objects of the company are fully explained in the prospectus.

In allotting the shares a preference will be given to parties in the iron trade. 55

Applications for shares and prospectuses to be made to Mr. Charles Chilton, No. 39, Moorgate-street; or at the Steam Mills, 135, Old-street.

NEWBRIDGE AND TAFF VALE COLLIERY,
GLAMORGANSHIRE.—2000 shares, at £10 each.

This valuable colliery is situate in the parish of Llanwonno, in the county of Glamorgan, in the centre of the South Wales Mineral Basin, contiguous to New Bridge, 12 miles from Cardiff; and the Taff Vale Railway, from Cardiff to Merthyr Tydvil, runs through the property—granted, by a lease of 360 acres, for the term of 31 years. The property is surrounded with profitable collieries—one of which (Mr. Coffin's) adjoins this, and supplies the Great Western Railway. Three veins are found to be throughout this property—the Goflion Vein, 3 ft. thick—the Cummor Vein, 3½ ft. thick—and Coffin's Vein, 4 ft. thick. These veins—proved by the usual computation—will yield an aggregate quantity of *five millions tons*. This, by working 200 tons per day, from one pit only, at a profit of 2s. 6d. per ton, will yield a clear income of upwards of £7500 per annum; but, as this rate of produce will last considerably more than thrice the period of the lease, the colliery will be worked by more pits, and, consequently, yield a profit of at least £20,000 per annum, at a cost of, say, 6s. per ton, and sale 8s. 6d. per ton; but Mr. Coffin obtains considerably more per ton; and, therefore, it is but fair to suppose the present company will obtain the same; in which case, the profit will be upwards of £30,000 per annum. Even this large sum cannot be supposed to be too highly estimated, when it is recollected that the utmost cost is estimated at 6s. per ton, and the sale only at the moderate price of 8s. 6d. per ton—whereas all coal of the district is sold above the estimate, and that the Taff Vale Railway runs through the property—that the colliery is within 12 miles of the large shipping port of Cardiff—that the coal can be raised from the pit and directly placed on the railway waggons—and that the coal is known to be of superior quality for steam-engines, from the fact of its being used by the Great Western Railway. The colliery will be in full operation in about two years. For the first year the shareholders will receive a dividend of only 5 per cent. out of the first year's produce; but, as in the meantime, the Goflion and Cummor veins will be reached, and be in gradual increase of produce—the second year's dividends will be large; and, therefore, there is every fair reason to say, this undertaking, not only carries the certainty of large profits, but presents fairer and more legitimate prospects of remuneration to the shareholders, than was ever presented to the public. 56

COST OF PRODUCTION AND CARRIAGE TO SHIPPING PORT.

Getting or Winning ..... *per ton*	1s 7d	Wear and Tear	0s 3d
Underground hauling	0 4	Railway Carriage to Port	1 1½
Dead Work	0 8	Shipping Expenses	0 6
Prop Wood	0 1	Divers extra expenses	0 3
Royalties	1 0	Agency and Incidental Charges	0 2½
Total			6s 0d

Sale, 8s. 6d.—Cost, 6s. 0d.—Profit, 2s. 6d. per ton.

Application for shares, to be made to Messrs. Roberts, Carter, and Co., mineral surveyors, 21, Portman-street, Portman-square, where the engineer's calculations may be seen in detail (also a plan of the property, and conditions obtained).

Prospectuses, &c., may be had at the office of the *Mining Journal*, 26, Fleet-st., London.

THE PROJECTED RAILWAYS.

PATENT METALLIC SAND OR ENGLISH POZZOLANO.

—The PROPRIETORS of the METALLIC SAND, after many years' experience of its merits, confidently RECOMMEND it to the attention of Engineers, Architects, Builders, and the public generally, as an invaluable article for HYDRAULIC and OTHER WORKS requiring great strength and durability.

In analysis, the metallic sand is very similar to the Italian Pozzolano—the value of which, in all subaqueous works, is so well known to engineers and architects; but from its granular form, and the sharpness of its angles, and the increased quantity of iron it contains, the metallic sand has been found more durable, and much cheaper than any other similar material at present in use. 57

From its chemical qualities it forms, in admixture with lime and common sand, a cement, mortar, or concrete, of flinty hardness, and almost entire incompressibility; and from its adhesive and impervious qualities, it completely and for ever excludes water. The more it is exposed to the atmosphere, and to wet and damp, the harder and more durable it becomes. In the formation of mortar and concrete, it has been extensively used in the great tunnels on the London and Birmingham Railway, in the foundations of the New Houses of Parliament, sea walls on the North Devon Railway, Clifton Reservoirs, and other works of importance.

As an external stucco, the metallic sand cement is unaffected by frost or wet; in appearance it resembles the best Portland stone; requires, therefore, neither colour nor paint, and is entirely free from vegetative cracks and blisters, to which Roman cement is liable.

Further information will be given, and specimens shown, on application to Mr. C. K. Dyer, 4, New Broad-street; and at the Metallic Cement Wharf, King's Road (opposite Pratt-street), Camden New Town, London.

ANALYSIS OF THE PATENT METALLIC SAND.

Silica	49	Lime	6
Oxide of iron	32	Magnesia	2
Alumina	6	Zinc	3
Arsenic and carbonate of copper			2

"A FRIEND IN NEED IS A FRIEND INDEED."

TOOTH-ACHE, TIC-DOLOREUX, & EAR-ACHE, instantly CURED; by using the celebrated GREGORIAN PASTE, which has never been known to fail in one single instance. It is perfectly harmless, and applied with the greatest ease. The Gregorian Paste is so well known and esteemed, that it is needless to speak of its virtues. Sold wholesale by F. Kain, 5, York-terrace, Commercial-road East, and by most respectable chemists. 58

PATENT GALVANISED IRON WIRE ROPE WORKS,
MILLWALL, POPLAR.

ANDREW SMITH begs to inform the Mining, Railway, and Shipping interests, that he has obtained a PATENT for an IMPROVED METHOD of GALVANISING IRON, producing a much superior article at a considerable saving in cost—the improved process for galvanising wire rope, adding only 10 lbs. per ton instead of 20 lbs., under the ordinary processes. The rope is extensively used in damp situations, for mining and railway purposes, and for ships' standing rigging. 59

IMPORTANT TO RAILWAY COMPANIES.

PATENT KAMPTULICON COMPANY, 18, CORNHILL.

This company having completed their new factory, are prepared to supply railway managers and contractors with an elastic material (perfectly non-absorbent) to place between the rails and sleepers, and between the frames and bodies of carriages, to prevent jarring, and, consequently, wear and tear. The elastic planking is strongly recommended to be used for the backs and sides of carriages, to prevent splinters when accidents occur. 60

By order of the board, P. G. GREVILLE, Secretary.

STEAM COAL—WITHOUT SMOKE, as per experiments made at her Majesty's Dockyard, Woolwich.

CAMERON'S COALBROOK STEAM COAL, AND SWANSEA AND LOUGHOR RAILWAY COMPANY.—(Completely Registered and Incorporated.)
OFFICES—2, MOORGATE-STREET, LONDON. 61

The directors are now prepared to supply steam ship companies, manufacturers, shippers, and others, with the company's steam coal, either at the company's wharf at Swansea, or in London. A statement, showing by comparative trial the superiority of this coal for steam purposes over every other, and a scale of prices, may be had on application at the company's offices here, or at their wharf at Swansea.—March 18, 1846.

IMPORTANT TO ENGINEERS, MANUFACTURERS, RAILWAY AND STEAM-BOAT COMPANIES.

Messrs. W. & C. MATHER beg to call the attention of the ABOVE PARTIES to their

IMPROVED ELASTIC METALLIC PISTONS. 62

The PRINCIPAL FEATURE and ADVANTAGE of THIS IMPROVEMENT is—

1. Its great ELASTICITY and SELF-ADJUSTING PROPERTIES, which enable it to yield to any inaccuracy of the cylinder, whether oval or taper, and to move with the least possible friction.

2. Its extreme SIMPLICITY and LIGHTNESS, consisting of only two pieces of metal, having the vertical and lateral pressure in due and proper proportion, independent of each other.

3. It takes the LEAST possible SPACE, and is well adapted for air and water-pumps, as it allows of a larger water way.

Messrs. W. & C. MATHER feel confident that it is the BEST ELASTIC METALLIC PACKING yet known, for the above reasons.

Models may be seen at the Salford Iron-Works, Manchester; at W. Barker's, engineer, Newton-Moor; and also at J. Mather's, engineer, Beaufort-street, Chelsea, London.

TO ENGINEERS, RAILWAY CONTRACTORS, MINING AGENTS, IRONMASTERS, AND OTHERS REQUIRING FINE GREASE for MACHINERY and AXLES of every description.—JOSEPH PERCIVAL'S IMPROVED ANTI-FRICTION GREASE is—after trials on machinery and axles of every kind where constant friction is kept up—admitted to be the most useful, economical, and best preparation of the kind ever offered to the public. 63

References to scientific and practical men can be given, and testimonials shown of its great excellence.—Samples forwarded on application at the manufactory, Green-street, Wellington-street, Blackfriars-road, London.

TO ENGINEERS AND BOILER-MAKERS.

LAP-WELDED IRON TUBES FOR STEAM-BOILERS.

THE BIRMINGHAM PATENT IRON TUBE COMPANY,
42, *CAMBRIDGE-STREET, BIRMINGHAM, & SMETHWICK, STAFFORDSHIRE,* MANUFACTURE TUBES under an exclusive license from Mr. Richard Prosser, the patentee. These tubes are now very extensively used in the boilers of marine and locomotive steam-engines in England and on the continent—are stronger, lighter, cheaper, and more durable than brass or copper tubes, and warranted not to open in the weld. They may be fixed in the boilers without ferules, and can be taken out and refixed without additional trouble or expense.—Address, 42, Cambridge-street, Crescent, Birmingham. 64

LONDON WAREHOUSE,
68, *UPPER THAMES-STREET.*

TO ENGINEERS, BOILER-MAKERS, AND OTHERS.—
LAP-WELDED IRON TUBES, FOR STEAM-BOILERS.

W. H. RICHARDSON, Jun., & CO., DARLASTON, STAFFORDSHIRE, MANUFACTURE all DESCRIPTIONS of WELDED WROUGHT-IRON TUBES, for STEAM, GAS, &c., of any required length and diameter, on the new and unequalled principle of Mr. J. Roose's recent invention (patented August, 1846).—Address as above. 65

PATENT IMPROVEMENTS IN CHRONOMETERS, WATCHES, AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each. 66

DENT'S PATENT DIPLIEDOSCOPE, or meridian instrument, is now ready for delivery. Pamphlets containing a description and directions for its use 1s. each, but to customers gratis.

NATIONAL LOAN FUND LIFE ASSURANCE SOCIETY.
26, *CORNHILL, LONDON.*

Capital £300,000.—Empowered by Act of Parliament.

This institution embraces important and substantial advantages with respect to Life Assurances and Deferred Annuities. The assured has, on all occasions, the power to borrow, without expense or forfeiture of the policy, two-thirds of the premiums paid (see table); also the option of selecting benefits, and the conversion of his interests to meet other conveniences or necessity.

Assurances for terms of years are granted on the lowest possible rates. 67

DIVISION OF PROFITS.

The remarkable success and increasing prosperity of the society has enabled the directors, at the last annual investigation, to declare a fourth bonus, varying from 35 to 85 per cent. on the premiums paid on each policy effected on the profit scale.

EXAMPLES.

Age.	Sum.	Prem.	Year.	Bonus added.	Bonus in Cash.	Permanent reduction of Premium.	Assured may Borrow.
60	£1000	£0 3 4	1837	£217 15 1	£109 0 11	£16 0 4	£445 0 0
			1838	192 3 0	87 1 4	13 10 2	395 11 1
			1839	165 11 10	74 1 9	11 3 1	346 2 3
			1840	116 7 6	54 0 10	7 18 10	296 13 4
			1841	111 6 8	49 10 0	7 10 4	247 4 5

The division of profits is annual, and the next will be made in December of the present year.

F. FERGUSON CAMROUX, Secretary.

GREAT BRITAIN MUTUAL LIFE ASSURANCE SOCIETY, 14, WATERLOO-PLACE, LONDON.

DIRECTORS.
THE CHISHOLM, Chairman | WM. MORLEY, Esq., Deputy-Chairman

HALF CREDIT RATES OF PREMIUM.

The attention of ASSURERS is particularly directed to the Half Credit Rates of Premium by which means assurances may be effected, and loans for short periods secured with the least possible present outlay, and at a less premium than for short terms only, and with the option of paying up the arrears and interest—thus becoming entitled to participate in the *whole of the profit of the institution.* 68

Extract from the Half Credit Rates of Premium.

Age 20.	Age 30.	Age 40.	Age 50.	Age 60.
£0 17 0	£1 1 1	£1 8 2	£2 1 0	£3 4 2

Thus £1000 may be assured at the age of 30 by the annual payment of £10 10s. 10d. for the first five years.

The whole of the profits divided ANNUALLY among the members, after payment of five annual premiums.

An ample guaranteed capital, in addition to the fund continually accumulating from premiums, *fully sufficient* to afford complete security to the policy-holders.

Members assured to the extent of £1000 entitled (after payment of five annual premiums) to attend and vote at all general meetings, which will have the superintendence and control of the funds and affairs of the society.

Full particulars are detailed in the prospectus, which, with every requisite information, may be obtained by application to A. R. IRVINE, Managing Director.

Copy of a Letter from "COLONEL HAWKER" (the well-known author on "GUNS AND SHOOTING")

Longparish House, near Whitchurch, Hants, Oct. 21, 1846.

SIR,—I cannot resist informing you of the extraordinary effect that I have experienced by taking only a few of your LOZENGES. I had a cough, for several weeks, that defied all that had been prescribed for me; and yet I got completely rid of it by taking about half a small box of your Lozenges, which I find are the only ones that relieve the cough without deranging the stomach or digestive organs.—I am, Sir, your humble servant,

To Mr. Keating, &c., 79, St. Paul's Churchyard. P. HAWKER.

KEATING'S COUGH LOZENGES are PATRONISED also by his Majesty the King of Prussia, his Majesty the King of Hanover, and most of the Nobility and Clergy of the United Kingdom, and are especially recommended by the Faculty.

RECENT TESTIMONIAL. 69

DEAR SIR,—Having been, for a considerable time during the winter, afflicted with a violent cough, particularly at lying down in bed, which continued for several hours incessantly, and after trying many medicines without the slightest effect, I was induced to try your Lozenges; and, by taking about half a box of them, in less than 24 hours, the cough entirely left me, and I have been perfectly free from it ever since.

9, Claremont-terrace, Pentonville, I am, dear Sir, yours, very respectfully,
Feb. 17, 1845. JAMES ELLIS,

Mr. KEATING. (Late proprietor of the Chapter Coffee-house, St. Paul's.)

Prepared and sold in boxes, 1s. 1½d., and tins, 2s. 9d., 4s. 6d., and 10s. 6d. each, by T. Keating, chemist, &c., No. 79, St. Paul's Churchyard, London; and retail by all druggists and patent-medicine venders in the kingdom.

N.B.—To prevent spurious imitations please to observe that the words "KEATING'S COUGH LOZENGES" are engraven on the Government stamp of each box.

NOTICE.—These Lozenges contain no opium, or any preparation of that drug.

PROSPECTUS OF THE

BRISTOL AND POOLE HARBOUR RAILWAY COMPANY.

Capital £1,000,000, in 50,000 shares, of £20 each.—Deposit £2 2s. per share.

REGISTERED PROVISIONALLY.

PATRONS AND SUPPORTERS.

Sir E. DOUGHTY, Bart., Upton House, Dorset.
JOHN SAMUEL WANLEY SAWBRIDGE ERLE DRAX, Esq., M.P., Charborough Park, Dorset.
J. WELD, Esq., Lulworth Castle, Dorset.
Colonel JOHN MICHEL, Dullish House, Dorset.
WILLIAM CARTWRIGHT, Esq., Proprietor of Collieries in Monmouthshire and Glamorganshire.
E. B. ASHFORD, Esq., Babcary, Somerset.

ACTING COMMITTEE.
HENRY STRETTON, Esq., Ramsgate, Chairman.

Major J. B. Home, Army and Navy Club.	Gilbert M'Queen, Esq., Great Coram-street,
John Gray Wilson, Esq., Westbourne Grove.	Russel-square.
Col. W. Mainwaring Sloane, Seymour-st.	Thomas Peers, 1, Lamb's Conduit-place.
Sir James Caleb Anderson, Bart.	George Chisman, Esq., Dalston, Middlesex.

PROVISIONAL COMMITTEE.
(With power to add to their number.)

Fred. William Hamilton, Esq., 59, Gloucester-place.
Rees Price, Esq., M.D., Tyne Hall, Great Ilford, Essex.
Capt. T. C. Newton, Bruton-street, and Lugwarden, Herefordshire.
Thos. Ottery Rayner, Esq., M.D., F.S.A., 1, Matthew's-place, Cambridge-heath.
Rev. C. Davies, Sandgate.
Major J. Mill, Guernsey.
Benjamin Head, Esq., 27, Gloucester-terrace, Kensington.
Edward Sankey, Esq., Canterbury.
J. Johnson, Esq., Davies-street, Berkeley-square.
G. Pusey, Esq., The Dells, Stoke Newington.
N. Crouch, Esq., South-place, Euston-square, and 64, Pall-mall.
R. B. Crofts, Esq., Hamilton-square, Birkenhead, Cheshire.
John Britten, Esq., Basinghall-street.
Lieut. Charles T. Hill, R.N., Queen's-square, Bristol.
Henry Lyster, Esq., Spring-terrace, Wandsworth.
Capt. Hippisley, Somerset-street, Cavendish-street.
Wm. C. O'Connell, Esq., Upper Seymour-street, Portman-square. 70

LONDON BANKERS.
London and County Bank; the London Joint-Stock Banking Company.

COUNTRY BANKERS.
Messrs. Stuckey and Co.; National Provincial Bank of England; Messrs. Ledgard and Co., Poole; Messrs. Bastard and Co., Blandford.

ENGINEER—George Ronnie, Esq.

SECRETARIES (pro tem).—Messrs. Castleman and Kingdon.

SOLICITORS.
Gilbert Stephens, Esq., 13, Northumberland-street, Strand.
Messrs. Castleman and Kingdon, Winborne.

Since issuing the former prospectus, the committee being determined to proceed on the surest grounds, and anxious for the ultimate success of the undertaking, have made further and more minute inquiries into the remunerative traffic to be expected on this line; and they are warranted in stating, that the result of such inquiries has greatly exceeded the expectations upon which they grounded their former prospectus.

This line of railway, commencing at Bristol, will open a direct communication with Poole, passing through or near the important towns and villages of Whitchurch, Pensford, Clutton, Shepton Mallet, Bruton, Castle Cary, Wincanton, Stalbridge, Sturminster Newton, Shillingston, Stourpain, Blandford, Spittisbury, Sturminster Marshall, Wimborne Minster, to Poole Harbour; and thus, by means of the line of packets intended to be established by this company, from that port to the Channel Islands and Cherbourg, and the railways now in progress from the latter place to the French capital, and from thence to Lyons, will complete the line of communication by the most direct way from Edinburgh to the south of France; thus enabling that country to supply herself with many articles of commerce at little more than half the cost she at present pays, and leaving a good remunerative profit to the company and producer at home.

Among the various sources of traffic to be expected on this line, the following are the most prominent:—The supply of the Government with coal from the Welsh and Somersetshire pits, by means of the proposed line, for its different naval and steam depôts throughout the world. The Somerset pits, which are 36 in number, yield at present, about 2000 per diem, but are capable of yielding a much larger quantity; and, supposing that 2000 tons were carried by the railway, at 1d. per ton a mile, a distance of 40 miles for 300 days in the year, which is even less than the company have every reason to expect, it would yield a net return of £100,000, or 10 per cent. upon the estimated capital; deduct then 40 per cent. for working the line, wear and tear, and there remains the sum of £60,000, or 6 per cent. per annum on the capital. There can be no doubt of the demand of this important article of general consumption, from the great diminution of price to the consumer by the costs of carriage being reduced to 1d. per ton per mile from the present cost, which is from 6d. to 10d. The supply of the Channel Islands (population more than 100,000), and of France, with the best species of coal for the production of gas, as well as for the use of their manufactures and for domestic purposes. This article, by means of the various coal-pits situated on the line, will yield to the company a very fine remunerative profit, and be of the greatest benefit to the coal proprietor, as the coal necessary for the purposes of gas can be obtained in very large quantities, and delivered at Cherbourg at one-third less than they are now giving for the same coal, and which cannot, therefore, fail to be of equal benefit to the merchant abroad, the producer at home, and the proposed company. Besides these two great sources of coal traffic, there is the supply of the southern coast, and the different districts on the line, with coal for domestic use, at a saving of from 6s. to 7s. a ton. This is a circumstance that cannot fail to secure to the company the entire traffic, and be of the greatest benefit to themselves and the public in general. In addition to this, the line will afford to the great manufacturing city of Bristol a more ready market for all those articles of commerce of which France and the Channel Islands stand so much in need, and which are manufactured in great quantities at that city; and as soon as the line is completed, tenders will at once be submitted to Government for the more speedy transmission of the mails to the Channel Islands, by which a saving of more than 12 hours will be effected, and to the north and north-west of Great Britain a saving of 24 hours.

There is also very considerable traffic to be derived from the various stone quarries, iron mines, and clay pits, on the line (the clay pits yielding alone more than 50,000 tons annually); sand from the Isle of Wight, for the manufacture of glass, of which more than 10,000 tons annually are used in Birmingham alone; the present mercantile traffic which now goes round the Land's-end to the western ports; the great agricultural, manufacture, and passenger traffic from the rich and populous districts through which the line passes; and the traffic which must be thrown upon the line from the Welsh iron and coal-masters, as being the nearest and most direct outlet to the continent for the produce of that country. Independent of remuneration, this line ought to be looked upon as a great national undertaking and benefit—as it will do away with the necessity for vessels now employed in the Dutch, Danish, Swedish, and Russian trades, bound to the western parts of England, going round the Land's-end, by at once opening to them the harbour at Poole, which has been pronounced by eminent engineers to be one of the best natural harbours in the world, and capable, at a small expense, of being made accessible to vessels of the largest class with perfect safety, and enabling them to send their cargoes to their different destinations in less time, and at less expense, than at present; by this means, not only will the shipowner and the merchant be greatly benefitted, but the company will derive an immense annual revenue from the cargoes of northern produce thus landed at Poole, to be again distributed, by means of their railway, to the different manufacturing towns throughout this country; and the passenger traffic that would naturally follow so large a portion of mercantile traffic cannot fail to yield to the company a very handsome return upon their outlay.

The average number of vessels detained in this trade in going round the Land's-end amounts, from the most authentic sources, to about 4000, each vessel averaging a detention of five days. The average tonnage of these vessels amounts to 130 tons, which would give six men to each vessel, working after the rate of £60 per month, which would give, for the number of days detained, £10 to each vessel: this, multiplied by the number of vessels—viz. 4000—would give the sum of £40,000, which will be entirely saved by means of this line. This is independent of the loss of life, destruction of property, expense of insurance, and loss of time, which would all be saved by the projected rail—the statistics of which, did space allow, would make every one look upon the present undertaking, not only as one of great local importance, but one of great national benefit.

The advantages have long been known and appreciated, and the present company have determined to bring them into play in the most full and efficient manner. The expense of storage at Poole, as well as the port dues, are less than at any port in the kingdom; so that the merchant would be enabled to keep his goods there at a less expense than at his own port. He would be enabled to perform five voyages for every three from the northern parts; and, by means of the speedy communication by the electric telegraph, and the rapid travelling of the present day, many advantages and conveniences will be afforded.

A careful preliminary survey having been made by the company's surveyor, the line has been pronounced to present less than the average engineering difficulties, about 30 miles being through a rich, populous, and level valley. The harbour of Pool has also been surveyed, and the bar at the mouth of the harbour has been pronounced to be capable of removal, and is now actually being removed; thus opening to vessels of the largest tonnage one of the safest and most commodious harbours in the world.

These are a few of the advantages offered to the public by the projected line; and the committee, impressed with the sense of the excellence and legitimacy of the undertaking, and basing their views upon ascertained facts and undoubted evidence, feel themselves warranted in offering to all applicants for shares the following conditions—viz: That no party taking shares in the said company shall be liable (in case of failure of the company) to a larger amount than 5s. per share, unless a greater sum shall be sanctioned at a general meeting of the shareholders called for that purpose: so that, in case the company fail at any period of time prior to such meeting being called, the committee pledge themselves to return £1 17s. per share instead of £2 2s., and a proportionately larger amount if the accounts of the company, upon inspection, show a less expenditure.

At the first general meeting of the shareholders the committee will produce an account, signed by the bankers, of the several sums received by them on account of the company—thereby warranting to the shareholders, that the amount subscribed is still in the hands of the bankers, minus the 5s. per share.

The future plans of the company will be laid before the shareholders at their first general meeting, and everything submitted to their investigation and approval.

To the Provisional Committee of the Bristol and Poole Harbour Railway Company.

I request you will allot me shares of £20 each, in the above undertaking, agreeably to the prospectus; and I agree to accept such shares as may be allotted me on the terms above mentioned, and also to pay the deposit thereon, and to sign the Parliamentary contract and subscribers' agreement, when required.—Dated the day of 1846.

Name .....
Residence .....
Trade or profession .....
Reference .....
Address of referee .....

*** Applications for shares may be made, in the above form, at the offices of the company, 55, King William-street, City; Gilbert Stephens, Esq., 13, Northumberland-street, Strand; Messrs. Castleman and Kingdom, solicitors, Wimborne; T. Hyatt, Esq., solicitor, Shepton Mallet; S. Smith, Esq., Blandford; M. K. Welch, Esq., solicitor, Poole; R. Bate, Esq., Bridgewater; Messrs. Drew and Charlton, sharebrokers, Manchester; Messrs. J. Smith and Co., stockbrokers, Edinburgh; Messrs. Stanley and Wasborough, solicitors, Bristol; Messrs. Bradley and Barnard, stockbrokers, Bristol; Messrs. Hill and Williams, solicitors, Farrington Gurney; J. McGeorge, Esq., 110, St. Vincent-street, Glasgow; Messrs. Lane and Perry, stockbrokers, Birmingham; Messrs. Thompson and Co., stockbrokers, Derby; and Messrs. Jones and Co., Dame-street, Dublin.

London:—Printed and Published, weekly, by HENRY ENGLISH, at the Office, No. 26, FLEET-STREET, in the city of London, where all Communications and Advertisements are requested forwarded—addressed to "the Editor"—post-paid. November 14, 1846.